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THE

VISITOR,

OR

MONTHLY INSTRUCTOR,

FOR 1838.

THE WORKS OF THE LORD ARE GREAT, SOUGHT OUT OF ALL THEM THAT HAVE PLEASURE THEREIN. HIS WORK IS HONOURABLE AND GLORIOUS: AND HIS RIGHTEOUSNESS ENDURETH FOR EVER. HE HATH MADE HIS WONDERFUL WORKS TO BE REMEMBERED: THE LORD IS GRACIOUS AND FULL OF COMPASSION.—PSALM CXI. 2—4.

WHATSOEVER THINGS ARE TRUE, WHATSOEVER THINGS ARE HONEST, WHATSOEVER THINGS ARE JUST, WHATSOEVER THINGS ARE PURE, WHATSOEVER THINGS ARE LOVELY, WHATSOEVER THINGS ARE OF GOOD REPORT; IF THERE BE ANY VIRTUE, AND IF THERE BE ANY PRAISE, THINK ON THESE THINGS.—PHILIPPIANS IV. 8.

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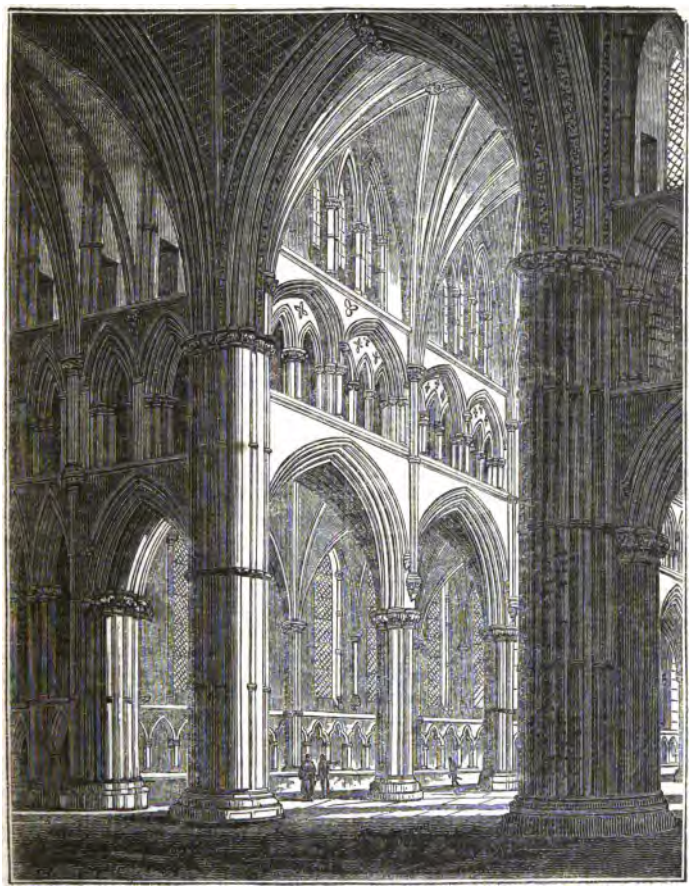

Linco'n Cathedral.

GOTHIC ARCHITECTURE.

ARCHITECTURE is a subject of general interest, both on account of its practical use and its influence upon the public taste. Architecture is the art of designing and constructing buildings, but the term is at the same time employed to designate the buildings

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themselves. Thus we may say that architecture should be understood by all persons of education, meaning that the art of erecting buildings according to fixed rules should be understood as a means of improving the taste, and increasing the pleasures of the student. But it would be equally proper to say of a cathedral or a castle, that it is an elegant piece of architecture. The term is applied to every description of building, though it should be restricted to those which display a symmetry of design and enrichment, according to some pre-determined rules. "Architecture may," says an anonymous writer, "be said to bear the same analogy to building that literature does to language." A plain brick wall covered in the ordinary way with bricks on their edges is not architectural, because it is poor, rude, and unadorned; it produces no pleasing effect, and is such as a totally uninstructed workman would construct, merely to answer the purpose required of it. As man, however, is endowed by nature with a taste for beauty and elegance, mere rugged utility does not delight him; as he becomes civilized, he seeks to embellish whatever he produces, that it may give him positive as well as negative pleasure, by presenting to his sense of vision what his mind may dwell on with complacency, and he is thus disposed to avail himself of the dispositions and decorations, which constitute architecture." In this he only follows nature, for the God of nature has so formed his works that they are as capable of giving pleasure to the senses, as they are of fulfilling the more immediate purpose for which they were formed. The fruits of the earth are pleasant to the taste, and grateful to the sight, as well as useful for food. Man in the performance of his works, frames them with such forms and in such proportions as are suited to his conceptions of elegance and taste. Architecture, as a fine art, has been said to excite the noblest powers of the human mind, and it is the parent and preserver of painting and sculpture, whose very existence may be said to depend on it.

Among all classes and communities of men there has probably been, from the dawn of civilization, a desire to decorate their dwellings, and places of public resort. In this way some characteristic style has become prevalent among all nations, which has changed in different periods according to the advance or decline of public taste and opinion. To one of these styles we now direct the attention of our reader. It is usually called the Gothic architecture on account of an erroneous opinion as to its origin, but may be more appropriately called the English, having been most successfully employed in our own country.

The Gothic architecture is generally distinguished from the Grecian, and those derived from it, in the form of its arch, and the want of any constant form, proportion, or decoration in its columns. The Grecian architecture derives all its power to please from the extreme symmetry and harmony of its parts; while in the Gothic these are entirely neglected, and we find grotesque figures of men and animals combined with columns and cornices, having no fixed proportion or decoration. In the Grecian architecture, the running lines, as in entablatures, are horizontal; in the Gothic, the running lines are vertical; in the former, entablatures are necessary where columns are used; in the latter, they are never employed. In the Grecian, arches are not used, and in the Roman are not necessary; while, in the Gothic, they cannot be dispensed with. This singular opposition of character between the two styles, has induced many intelligent writers to condemn the Gothic as barbarous and unfit for use in any character of building. But however singular it may appear that things contrary to each other, and governed by directly opposite principles, should be able to excite equal sentiments of pleasure, it is no less true; and we do not envy the man who can examine with admiration the relics of ancient art, and yet turn with either pretended or real disgust from the cathedrals of York and Salisbury.

SAXON AND NORMAN GOTHIC.

In describing the varieties of Gothic architecture, it has been customary to commence with that style adopted by our Saxon and Norman ancestors. This is not absolutely necessary, for although it has many characters in common with Gothic architecture, it has many that are dissimilar, and there may be some doubt as to the propriety of classing it with that style. But as it immediately preceded it in regard to time, some notice must be taken of it, before we proceed

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to speak of the style more immediately under consideration.

There are but few specimens of Saxon architecture in this country, and they are so rude and imperfect, that but little notice can be taken of them. The style employed anterior to the conquest, was a barbarous imitation of the Roman, decorated, or more properly debased, by the introduction of singular and unmeaning ornaments. The only specimens of Saxon architecture that are now in existence, are huge square towers, without windows, battlements, or decorations of any kind. These towers are commonly much larger at the bottom than at the top, and were styled earth-works, being erected for the purposes of defence. There is a great difference of opinion among writers as to the state of architectural knowledge among the Saxons; some deny them any acquaintance with the art, while others give them the credit of erecting many gorgeous, if not elegant structures. Dr. Milner says they copied the ornaments of the Roman Corinthian order, substituting the forms of men and animals, for the richer embellishment of foliage. The Saxon churches, according to another writer, consisted of a rectangular nave, with a portico at the western end; the eastern end was similar in form to the place of the tribune in the Basilicæ, and the nave was divided into three parts by two arcades, above which were galleries. The arches were semicircular, and rose immediately from the capitals of the columns. The shafts of these were very massive and generally cylindrical, though columns of a different form seem to have been sometimes used. Here we have a particular, almost minute description of the Saxon churches, the accuracy of which many antiquaries deny; we leave them to dispute the question, and proceed to speak of the Norman style, upon which there can be little difference of opinion.

The Norman Gothic is distinguished by its semicircular arches supported by massive columnar piers. The doors and windows are similarly arched, and are decorated with thin columns, which receive the mouldings; when the columns are not introduced, deep mouldings are carried down the jambs of the doors. The zigzag, and the chevron are the most common ornaments; animals, foliage, and flowers are also introduced as enrichments.

This style was practised in that period which intervened from the conquest to the reign of Henry II., when the pointed arch made its appearance. Those who believe the style to have been progressive from the time of the Saxons, imagine that the only difference between the architecture of the two periods was in the manner of execution.

There are many interesting and well-preserved specimens of Norman architecture in the country. The vestibule of the Inner Temple church, the chapel of the Tower, and parts of St. Bartholomew in Smithfield, are the best in London. The nave of Rochester cathedral is one of the best remains of the style in the country, but in nearly all the other cathedrals some specimen may be found. Iffley church also affords some exemplifications of the character of the architecture; we have given a view of the doorway, as an illustration, on p. 4. Mr. Rickman mentions two specimens as peculiarly worthy of observation; the vestibule of the chapter-house at Bristol, which is remarkable for its simplicity and beauty, and the staircase leading to the registry of Canterbury cathedral, the enrichments of which are peculiarly fine.

In the Norman churches a square tower was usually erected at the western end, which was the principal entrance; but sometimes one was placed on each side of the entrance. These towers were frequently ornamented with tiers of arches occasionally intersecting each other, though commonly separate.

The churches of Germany and France, erected during the twelfth and thirteenth centuries, have a great similarity of appearance to those of England. Specimens may be seen in the cathedrals of Aix la Chapelle, Spires, Mentz, and Worms. It is, however, exceedingly difficult to determine the precise age of these relics of art, either in our own or in foreign countries, for one portion after another has been removed, so that it is not uncommon to find a Norman door in a structure of comparatively recent date.

At the close of the twelfth century, in the reign of Henry II., the pointed architecture was introduced into England. Writers usually divide this style into three classes, which Dr. Rickman has denominated the early English, the decorated English, and the perpendicular English; other writers have spoken of these varieties in reference to the periods

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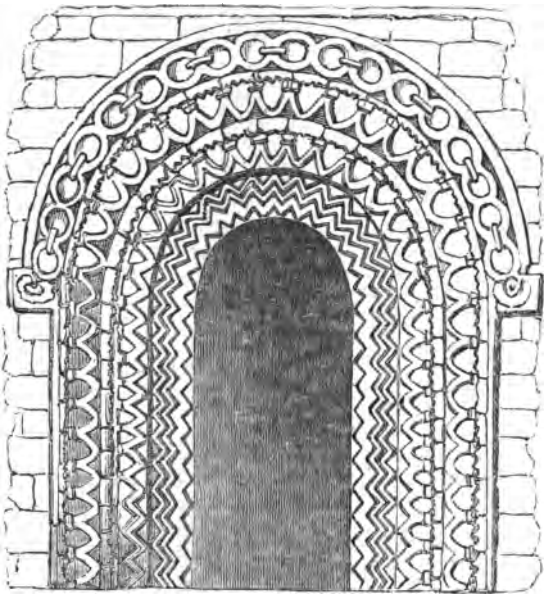
in which they flourished. The first was introduced in the reign of Henry II., as already stated; the second in the reign of Edward I., in the beginning of the



Doorway of Iffley Church.

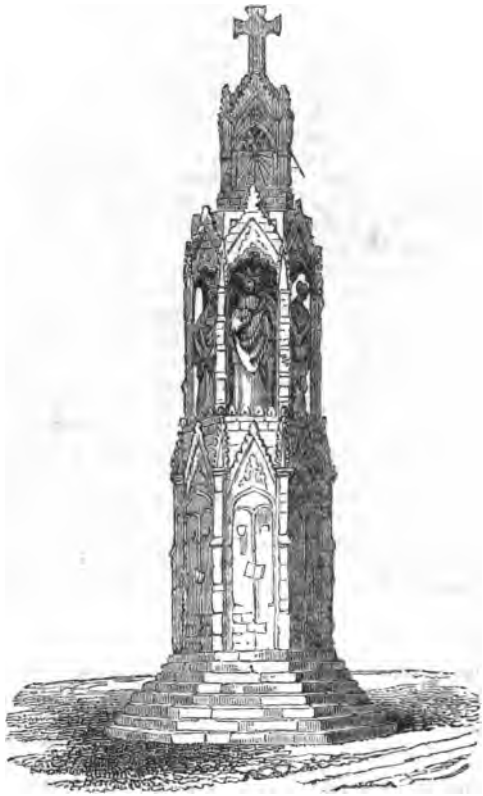
fourteenth century; the third in the close of the same century, in the reign of Richard II.

THE FIRST PERIOD OF GOTHIC ARCHITECTURE.

The architecture of the first period is distinguished by its pointed arches and long narrow windows without mullions. But when we speak of the architecture of a period, it must not be supposed that all the specimens will have precisely the same characters. The changes which are constantly made in the arts, by the varying circumstances of society, are not violent. The progress of society is always gradual, and even the revolutions, which to the casual observer appeared most fortuitous and unexpected, might have been foretold by a more thoughtful and discriminating mind. The state of the arts is commonly supposed to be a tolerably accurate criterion of the mental condition and civilization of a people. If, then, architecture be so dependent on society, we may expect that in any considerable period, there will be a great difference in style, although the same general characters may be traced in all the specimens. This was the case in the first period of Gothic architecture. Those buildings erected soon after the close of the Norman period, were massive, and the sharp lancet-arched windows were formed in rows, with rude columnar piers of the former period between them. Of this we have an example in Romsey church, Hampshire. As the next period advanced, we find the edifices to approach the florid style, by which that second period was distinguished. The lancet windows or arches are carried by clustered columns, with rich capitals, and moulded bases; of this we have an example in the nave of Lincoln cathedral.

We have many beautiful specimens of the architecture of the first period in this country; Salisbury cathedral is the finest. This noble edifice, unlike any other, except Bath abbey, was commenced and finished in the same style, and is a perfect model of the early English. Beverly Minster is another fine example, a great part of Westminster abbey, the transepts of YorkMinster, and the fronts of Ely, and Lincoln cathedrals. The rich and elegant crosses, erected by Edward I., to the memory of his queen

Eleanor, may be considered as specimens of the transition from the first to the second period. We here give a representation of that erected near Northampton, which will afford the reader an idea of the gradual passage from one style to the other.



Northampton Cross.

Neither mullions nor tracery are introduced in buildings belonging to the first period. Flying buttresses, and buttresses in diminishing stages, are also characteristic. The parapet or battlement is straight and uninterrupted, and is either plain or ornamented with series of arches or panels with foliations. The turrets are in some cases square, in others octagonal; but the pinnacles which surmount them are almost always of the latter form. Towers in the style of this period were generally made to receive that beautiful characteristic of pointed architecture, the spire.

(To be continued.)

JULIA BRACE.

Julia Brace is a deaf, dumb, and blind pupil of the American Deaf and Dumb Asylum, at Hartford, Connecticut. The following account of her is from the pen of Mr. Weld, the principal of the Asylum, and is extracted from the last annual report of that institution:—

On the 11th of June, 1825, Julia Brace was admitted as an inmate in, and so far as her peculiar circumstances would permit, as a pupil of the Asylum. She was born in Hartford, on the 13th of June, 1807; consequently, was eighteen years of age at the time of her admission, and is now (April, 1837) almost thirty. At the age of four years and

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about five months, while visiting a relative in a neighbouring town, she was seized with the typhus fever, which, in the course of the first week of her illness, entirely deprived her of the senses of sight and hearing. Previous to this sickness, she had been healthy, enjoyed the perfect use of all the senses, was possessed of common intellectual, as well as physical powers, had a quick temper, but was on the whole a promising child. She was active in her habits, had been sent to school, and could read and spell words of two syllables. She had begun to be somewhat useful to her mother in her household affairs, and had learned to do plain sewing, so that she had assisted in making a little garment or two for herself. Her mother had taught her "to say her prayers," but she had learned, probably from intercourse with a profane person, to use some very exceptionable words.

The sickness which rendered her so desolate, was exceedingly severe, and after accomplishing its fearful work upon her senses, left her system so completely prostrate, that it was long doubtful whether she would ever be restored to comfortable general health. She retained, however, for a considerable time the faculty of speech, and shortly after she became blind, she said to her attendant, "Why don't you light a lamp? it will never be day." She used also to say her prayers after she became deaf and blind, to utter the names of her friends, to ask for what she wanted, to spell little words to herself, and at times when disappointed, or vexed by her wishes not being complied with, by the difficulty of making herself understood, or by the unkind treatment of a male member of the family, to which she was occasionally subject, she would use profane expressions, such as she had no doubt heard from this unhappy person. Her childish spirit doubtless at this period, wandered about its prison-house in restlessness, anxiety, and sometimes in agony; seeking deliverance, striving for communion with kindred minds, and using all the faculties and senses which remained at its command, to make known its condition, and supply itself with occupation and amusement. In making these efforts, the poor child very naturally used such language as she had been familiar with; often, probably, with very imperfect ideas of its meaning: for, judging from the cases of other children of that tender age, especially such as have enjoyed but indifferent instruction, we cannot suppose that this poor child had distinct ideas of the God she addressed in prayer, and whose name she used in other ways, or, of the full meaning of any other than the simplest language.

As her strength increased and she became able to stand, and with the aid of others to walk about the house, her means of enjoyment increased also. She had much pleasure in examining by the senses of feeling and smell the various objects around her. She soon became familiar with every article of her own apparel, and indeed with every thing belonging to the family; and while her parents lived in the same house with another family, has often been known to carry back to their owner such utensils or other articles as had been borrowed or lent, often to the amusement, and sometimes to the inconvenience of both parties. She early evinced great love of order, never allowing any thing to be out of place, if she could prevent it. She also, as she grew older, seemed desirous of occupying herself in the care of her brothers and sisters, of whom she had several, all younger than herself: would sometimes wash their faces and hands, would undress and put them to bed, occasionally exercise some discipline among them, would rock the infant in the cradle, and feel its eyes, to ascertain if it were sleeping, and if she found it crying, would sometimes give it sugar. Whether she had learned by experience that her mother, on whose labour the family were principally dependent for support, was generally busy, and that she might aid her by these efforts among the younger children, or whether she made them merely for her own amusement, it is difficult to determine: probably both motives influenced her.

After her complete recovery, and during all the time of her growing up, she was favoured with perhaps more uniform health than is common; which has continued to the present time. She was generally obedient to her mother, or the woman, whoever she might be, that had the care of her; and was ready to comply with the wishes of any one in whom she had confidence; but was cautious in regard to strangers, and particularly fearful of men, shrinking from

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them, and appearing disturbed, if aware of their presence.

Julia was not unusually fond of sleep in her childhood and youth, but evinced at times a disposition to change night into day, evidently preferring to rest while others were busy around her, and to be active while they were still. As darkness and light were the same to her, it is not wonderful that she should choose the most quiet portion of the twenty-four hours, in which to accomplish her own purposes either of business or pleasure; for being solitary in almost all her enjoyments, she was particularly displeased with interruptions in their pursuit.

Her mother naturally granted her every indulgence in her power; still, as her means were limited, her supplies, though sufficient for comfort, were not abundant. Hence poor Julia learned to attach a high value to whatever she thought her own, was unwearied in the care of it, and resented the interference of others. In regard, however, to the making of her clothing and to those things about which she needed assistance, she was perfectly compliant with the wishes of others. Her notions respecting the right of property seem to have been perfectly correct. She would never take the property of others without leave; and if her own was taken, or disturbed in her view improperly, she showed her displeasure, and seemed greatly afflicted. She evinced no fear of sickness, but was very kind when members of the family were sick; would show by her manner that she felt sorry for them, would smooth down the bed-clothes, put her hands gently upon their faces, and sometimes spread the little table and bring it to the bed-side with a cup or two upon it to contain drinks. This was, of course, done in imitation of what she had experienced from others, or had known done by them.

Julia's very unhappy situation rendered her an object of curiosity to the benevolent, by whom she was constantly visited, and by whose benefactions she was in a great measure supported. Still, though pieces of money and other things of value were often put into her hands by strangers, it is remarkable that she never seemed disposed, in the first instance, to consider them as gifts; but would uniformly return them, unless assured by signs she could not misunderstand, that they were for her to keep. Her apparent destitution of covetousness and actual delicacy of feeling on this subject, have often attracted admiration. Her peculiar circumstances had, from the beginning, called forth the compassionate regard and the requisite pecuniary assistance from charitable ladies and others, in whose neighbourhood she lived. She had at times been sent to a little school for children, where she had learned to knit; she had been enabled to retain her ability to sew by proper care on the part of her friends: and on the whole, as she advanced in age, had an increasing amount of resources for comfort and happiness, during her dark and silent journey of life. Still it was evidently desirable that a home for life should be provided for her, where all her wants might be timely supplied, and her means of happiness, if possible, increased. With this view, the Directors of the Deaf and Dumb Asylum received her under their care, when she was eighteen years of age. She has now been about twelve years an inmate, and the kind intentions of her benefactors have been fully realized. Here she soon conformed to the rules of the institution, and has been most exemplary in the observance of such as applied to her case. For instance, she has been an example of punctuality in her attention to such little duties as were assigned her, has been orderly in her habits, and has learned to be very neat; has regarded the rights of others, and has attended, in the best way she could, to her own. Much of this is owing, indeed, to the judicious treatment of those who received her here, and led her to the formation of good habits; and habit, in her case at least, is second nature. She has retained these good habits, and finds her happiness in their observance.

It was an object of much interest with the principal and instructors of the Asylum, on her admission, to try the effect of some experiments in teaching her language. They indulged the hope that ultimately they might devise some plan to communicate even some abstract ideas, and especially, moral and religious truth. Accordingly by means of an alphabet carved on wood, and resembling that used in schools for the blind, she was taught to understand and to form in her own way, the letters composing a few simple words. For example, she was furnished with a cushion, and a supply of pins; the teacher then placed in her hand the thing whose name he proposed

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to teach her, directing her hand to the carved letters, composing its name; then, by sticking the pins upon the cushion, he formed the respective letters and the word. This she was encouraged to do, until, when the thing was presented to her, or its sign made in her hand, for instance, a key, or the deaf-mute's sign for a key, she would, without assistance, form the letters, *k*, *e*, *y*. In this way, several short and easy words were taught; but the experiment soon became uninteresting to her; it was of course very tedious and laborious to her teacher, and as there seemed no probability of any important result for her benefit, it was abandoned.

Much greater success has attended the attempt to teach her the language of the Asylum; or rather, such of the conversational signs of the deaf and dumb, as are necessary to convey ideas on common subjects; indeed, with the exception of abstract ideas, on all the affairs of common life. For instance, the principal of the institution wore spectacles, and was the only person of the house who did so. He had long been distinguished among the deaf and dumb, by the sign for spectacles made with one or both hands upon the eyes. After feeling his spectacles herself, and having the sign made for them a few times by others, she readily learned to understand and use this sign as appropriate to Mr. Gallaudet alone. In a similar manner, the signs or names distinguishing other individuals were taught; as also those for the objects around her, which it was most important for her to know. A person by taking her hands in his own, and making signs with them, or by permitting her to feel his hands and arms when in the act of signing, could readily communicate with her, on the very simple subjects with which she was most conversant. This is still the method of talking with her, and imperfect as it may seem to a stranger, is yet sufficient, in the hands of one at all skilful in the use of signs, greatly to promote her happiness. It restores her in an important degree to society. She is sent for an article of dress, for her scissors, thimble, or any thing of her own, with entire ease, and with as much certainty that she understands what is wanted, and will procure it, as could be had in the case of almost any other person. If one whom she knows is sick, she is informed of it; or if a death occurs, she makes the signs for weeping, for being sorry, and perhaps for burying, and is desirous of going *to see* the corpse. If permitted, she examines the grave-clothes, feels the face and hands of the dead body with great delicacy and carefulness, makes the sign for being dead, says the friends are sorry, &c. Still we do not know what her ideas of death are. She cannot fail to know that a great change has passed upon the body, and that soon after it is carried away; but farther than this, all is probably mysterious. Several deaths have occurred in the Asylum since her residence here, all of which have been deeply interesting to Julia. From the first she undoubtedly obtained her original ideas, whatever they were, of so great a change; for when, after a careful and earnest examination, she satisfied herself that the body was incapable of motion, and had ceased to breathe, she seemed filled with horror. In succeeding instances she has been less deeply affected, though the impression in each has been agitating and distressing in a considerable degree. She is disposed to make signs about the event, while it is recent, to herself sometimes, and to others, whenever it is alluded to.

On the Sabbath, Julia dresses herself in her best clothing, and taking her rocking-chair, begins the observance of the day, by abstaining from all her customary employments. She never fails to know when the Sabbath returns, nor to keep it throughout, negatively at least, in the strictest manner. This, so far as we know, is simply the result of habit, and in imitation of the example of those around her. She probably recollects nothing of what she may have been taught, previous to her misfortune, in regard to the nature of the Sabbath; nor, indeed, is it probable that she was, at that early age, ever instructed on the subject, except by the examples of her friends. She shows a certain regard for the Sabbath in another way. When permitted to visit her mother, and spend some days with her, she can never be persuaded to remain longer than till the afternoon of Saturday; but gets her bonnet and insists upon returning soon after dinner. What her reason is we cannot discover, unless, perhaps, a desire to enjoy the quiet and the rest of this day in her own rocking-chair and chamber, where she is sure of not being disturbed.

Julia rises in summer at about four,

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and in winter, at about five o'clock in the morning. She retires at about nine o'clock in the evening throughout the year, and is in general perfectly quiet at night. She sleeps in a large chamber, in which most of the other female pupils also sleep; but never gives them the least inconvenience. She is uniformly the first up in the morning, washes, dresses herself without assistance, always stands before a looking-glass, when she is combing and dressing her hair, generally makes her bed before breakfast, and always in the best manner; and then goes down to the sitting room, and waits patiently for her breakfast; after which, she has for years washed and wiped the tea-spoons, used on the pupils' tables, amounting to a hundred and twenty or thirty, and this she also does after tea. During term time, they are collected for her, from the various tables, but in vacation she gathers them herself; and it is amusing to notice her on the first morning of the vacation, setting off on her journey of collection around the hall, without any thing being said to her on the subject. When washed and wiped, she puts them in the proper place, and also her towels, which she is careful to have changed as often as the most scrupulous neatness requires. If tea-spoons from the steward's table become mixed with the others, she instantly detects and separates them, though a casual observer would hardly notice the difference. After leaving the breakfast-room, if she has any unfinished work on hand, sewing, knitting, or mending, she goes about it without direction from the matron; otherwise, she waits till some employment is assigned her. She commonly sews or knits five or six hours in a day, but if making any thing for herself, she doubles her diligence, working with great perseverance till it is accomplished.

On days when the clothes from the weekly wash are ironed, she goes early to the ironing room, puts her flat-irons to the fire, unless it has been done by another, selects her own clothes from the mass, belonging perhaps to one hundred and thirty or forty persons, and never fails to get every article. Her manner is, to examine each article by feeling, but to decide upon it by the sense of smell; and in regard to her own things she never errs. As it respects those of others, her power of discrimination is very remarkable: for instance, she will, if desired, select and separate the stockings of the boys from those of the girls; she will get every article belonging to a particular individual; and it is the matron's opinion, that she could in this way distinguish the respective articles of every female pupil of the institution. It should be recollected that these articles are clean from the wash; and yet, such is the acuteness of her smell, that she can discriminate with almost unerring accuracy. She irons slowly, but very well, and sometimes for the family, as well as for herself. At one time she chose to wash the smaller articles of her apparel, such as capes, handkerchiefs, and white stockings, and never failed to get them clean, changing the water often, and using soap in abundance; at present she allows this to be done for her.

Julia performs the entire work of knitting a stocking without assistance; shapes it properly, narrowing, widening, &c. She is apt, however, to err in making her own too small; whether from a desire to exhibit a very trim foot and ancle, or for other reasons, does not appear. She has been known on examining the knitting work of a little girl, to discover its defects with surprising readiness, and after condemning them in strong terms, to pull out the needles, unravel the work, till she had removed all its imperfect parts, and then, taking up the stitches, return the fabric to its owner to be finished.

She makes her own clothes; so far, at least, as the sewing is concerned, except that she has some assistance about the waist and sleeves. Her clothes are cut out by another; still she is very competent to the chief management of the business of making them, and even cuts out, and makes entirely, some of the simpler articles. She is desirous of having her dresses fashionable; or rather like those of others, and especially of the younger girls around her, which she examines as they make their appearance from time to time; and when her own are about to be made, she mentions whose she would have them like.

She is slow and careful in all her movements, and especially about her sewing; still she has often made a sheet in a day, and one instance is recollected, in which she made at least half a dozen of towels in the same time. She threads her needle by means of her fingers and tongue, but the precise manner of doing

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it cannot be seen. We see her put the needle and thread to her lips, and soon remove them prepared for use.

Julia is very systematic in all her doings, and yet readily falls in with any new arrangement adopted by the matron. After the plan of locking up certain lodging rooms had been in operation a few days, Julia, voluntarily, took it upon herself, *to see* it done at the proper hour every morning, and also to open them early in the evening before they could be needed; always returning the keys to the matron's room. She is also thoughtful about the windows and blinds of the lodging rooms in summer, frequently shutting them, when a storm is rising, which she perceives by the change of the temperature, or increase of the wind, and always doing it when desired.

Her attachments, in a few instances, have been marked and strong towards those with whom she has long lived, and from whom she has derived much happiness. Separation, however, for only a short time weakens them perceptibly, and after a considerable period has elapsed, she scarcely recognises even her best friends; or if she does, the impression seems very soon to pass away. Those who have made her presents of particular value, in her view, she is apt to remember, and shows pleasure at meeting them again; when she refers to the gift with which they are associated. She always has some few favourites among the pupils; and when they leave the institution she expresses regret, but soon selects others to supply their places, and according to the dictates of philosophy, as well as common sense, makes the best of what is unavoidable. She seems to regard her mother, sisters, and brothers, with an affection differing in degree from that which she shows towards others. As she had lived with them, and derived most of her happiness through their means, till she was eighteen years old, it is very natural she should feel thus, even though, so far as our knowledge extends, she may be perfectly ignorant of the relationship subsisting between them and herself.

Julia is easily pleased by those attentions which are gratifying to others. She accepts an occasional invitation to ride, from some officer of the Asylum, with great pleasure; enjoys the ride highly, and speaks of it afterwards with satisfaction; not forgetting to say, that the person who has thus gratified her is good.

When she thinks she needs a new article of dress, she goes to the matron, shows the old article she desires to dispense with, tells her she must go to the principal, get him to open her money-box, take some money, and give it for the new thing desired. This is a specimen of the exactness with which she can express herself by signs, on a common subject. The following is another: —If she becomes seriously offended with one of the girls, (which is sometimes the case, and for which there is occasionally a sufficient cause,) she goes with the offender to the matron, states the offence in strong terms of condemnation, and says the steward or the principal must be called, to inflict the appropriate punishment; specifying sometimes, locking up, boxing ears, and whipping. It ought, perhaps, in justice to be added, that generally, she is treated with the utmost kindness by the pupils, and that the punishments she mentions, though not common in the Asylum, are such as poor Julia may have experienced the value of in her younger days.

It has been intimated that our means of intercourse with Julia are limited to such objects and actions as are cognizable by the senses of feeling, taste, and smell; her destitution of the superior senses of sight and hearing being apparently complete. It is even doubtful whether, through any sensation produced by light upon her organs, she can distinguish day from night, but there is no doubt of her being perfectly deaf. We have also excepted abstract ideas from the number of those about which we can satisfactorily communicate with her. So far, however, as certain very general abstractions are concerned, we have reason to suppose that she does understand us: for instance, the general ideas conveyed to her mind by the signs expressive of approbation or disapprobation, health or sickness, pleasure or sorrow, are in all probability such as we design to communicate; the evidence that it is so being often quite satisfactory. This, however, is as yet the extent of our intercourse on such subjects. We cannot speak to her of the mind, or of spiritual existence in any form, and if we should attempt it successfully, she might not have the ability to make us aware of our success. The following experiment has lately been tried. Her attention was called to a great variety of artificial objects, and she was told that Miss C. made

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this, Mr. S. that, a man one, a woman another, and so on. The idea of making is familiar, for she makes some things herself. Then, a number of natural objects were presented her, such as minerals, fruits, flowers, plants, vegetables; and she was told that neither this friend nor that acquaintance made any of them; that neither men nor women made them. The hope was entertained that her curiosity would be excited, and that a way might be discovered to convey to her mind the great idea of the Almighty Creator. The attempt was not successful; and though several times repeated, has not as yet resulted in exciting her mind, fixing her attention, or giving us any encouraging indications.

Her days pass with very little of incident, or variety, yet there is enough of both, which comes to her knowledge in so large a family, to furnish materials for reflection, and to call out in some degree her feelings towards others. If sickness or accident occur, she is told of it. If a journey is to be taken or a new pupil is received, she is early informed of it. If any member of the establishment loses a friend, if any interesting event happens, either of a joyous or afflictive nature, it is mentioned to poor Julia, and produces an appropriate, though transient effect. The birth of a child in the circle of her acquaintance is always an event of particular interest to her, and she is desirous of improving the earliest opportunity to visit and examine it for herself. This she does, when permitted, with great care and tenderness.

During the warm season, the concourse of visitors to the Asylum is very great; often amounting to fifty or more persons in a day, for weeks together. Almost all desire to see Julia, and in gratifying this desire, she is often disturbed in her pursuits, her plans for the day are broken up, and her patience is severely tried. Under these circumstances, her deportment is sometimes less amiable than her friends could desire; but on the whole, not more, indeed much less faulty than those would expect, who have a full view of her circumstances.

Many more facts and anecdotes might be mentioned in regard to this most unfortunate young woman, were it not for the fear of extending her story to too great a length. Enough has been said to show in some degree the real condition of her imprisoned mind, and to gratify in part, it is hoped, the curiosity so extensively felt concerning her. Should any greater success attend the efforts made hereafter for her improvement, or should any thing occur concerning her, calculated to shed light upon the phenomena of mind, or particularly to interest the mental philosopher or the Christian, the facts will, no doubt, be given to the public.

ON THE COCHINEAL AND LAC INSECTS.

While engaged in examining a collection of foreign insects, we were naturally led to reflections upon the utility of these beings to man, not only indirectly, from the part assigned them in maintaining the balance of creation, but directly, in as far as either themselves or their products are subservient to his benefit, or minister to his wants. Silk, honey, and wax are familiar examples of the useful products of insects; we may also allude to the nut-gall, which, though vegetable, requires the aid of an insect for its production; being in fact a diseased excrescence on the leaves of a species of oak, *quercus infectoria*, common throughout Asia Minor, and resulting from the introduction of an egg beneath the cuticle of the leaf, by a species of fly, *cynips*. The excrescence immediately begins to grow, and in it is hatched and lives the caterpillar, undergoing the usual transformations. In nutgalls, the astringent and general properties of the oak are highly concentrated; their importance in dyeing black, and in making ink are well known. The use of the Spanish fly, *cantharis vesicatoria*, in medicine all are acquainted with, but many others are possessed of the same properties, and are used, some in America, others in China, and Ceylon, in their place. There are, however, among the numbers we might instance as valuable to man, two small insects of great importance, as regards the arts of civilized life, the history of which is but little known; a few details, therefore, respecting them will, no doubt, prove acceptable. The insects to which we allude are the *cochineal* and the *lac* insects.

Cochineal, we need hardly state, is used as a dye, producing the most beautiful scarlet; but, besides its importance to the dyer, it is used for various purposes, where its colouring matter is required. It is a most important article of

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commerce, and long before its introduction by way of traffic into Europe, had been employed by the natives of Mexico, the country where it is alone cultivated. The appearance of cochineal is that of a shrivelled grain, of a dark purplish hue, and covered with a white bloom; hence, for two centuries after it became known, about the year 1518, its true nature was not ascertained; it was generally supposed to be the seed of some plant, till microscopic observations and direct information combined to dispel the mystery.

Cochineal is an insect closely allied to the *Aphides* which we see so abundant on rose trees, or geraniums; feeding in the same manner on the succulent shoots of a peculiar kind of fig, called in Mexico *nopal*. Hence plantations of this fig are kept up for the sake of the insect produce; and from the name of the figs are usually called *nopaleries*. Kirby says that cochineal, *coccus cacti*, is "chiefly cultivated in the Intendency of Oaxaca; and some plantations contain fifty or sixty thousand nopals in lines, each being kept about four feet high, for more easy access in collecting the dye. The cultivators prefer the most prickly varieties of the plant as affording protection to the cochineal from insects; to prevent which, from depositing their eggs in the flower, or fruit, both are carefully cut off. The greatest quantity, however, of cochineal employed in commerce is produced in small nopaleries, belonging to Indians of extreme poverty, called *nopaleros*. They plant their nopaleries in cleared ground, on the slopes of mountains or ravines, two or three leagues distant from their villages, and, when properly cleaned, the plants are in a condition to maintain the cochineal in the third year." The mode of procuring a stock, is by purchasing, in the market of Oaxaca, twigs laden with young cochineal insects, which, after a careful nursing of several months, till about to re-produce themselves, are then distributed among the nopals. The first gathering takes place in about four months from this period, which is in August or September. Two more gatherings, usually the most productive, succeed during the ensuing course of the year; the gathering is performed by the Indian women, and requires great care and patience. It is done by means of squirrels' or stags' tails, with which the insects are brushed off the twigs and stems. After being thus collected, they are killed, either by exposing them to the heat of the sun, or by immersion in boiling water, or by placing them in ovens. Humboldt informs us that the quantity at present annually exported from South America, amounts to 32,000 *arrobas*, their worth 500,040 pounds sterling. Dr. Bancroft estimates the present annual consumption of cochineal in Great Britain at about 750 bags, or 150,000lbs., worth, at the present price, £375,000. Although the East India Company have offered a reward of £6000 to any one who shall introduce it into India, no success has yet attended any effort, an uncultivated and very inferior kind from Brazil being the only sort hitherto procured. Such is the importance, then, of this little insect, whence, as Kirby says, we may learn "the absurdity of despising any animals on account of their minuteness," remembering that they, as well as the hugest elephant, are the work of His hands, in whose eyes there is neither *great* nor *small*, and whose power is alike displayed in every part of the domain of nature.

Lac is a resinous substance, largely imported from India, where it is found in great abundance adhering to various trees; it is the secretion of an insect allied to the cochineal, and known in science under the name of *coccus laceu*.

Lac is variously and extensively employed in the arts and manufactures. In India it is mixed with sand to form grindstones; dissolved in water, and mixed with ivory-black, it forms a good and durable ink, it also enters into the manufacture of beads, and other female ornaments.

In this country, lac is much used in the composition of varnishes, japanning, sealing wax, &c.; it is known as *stick-lac*, when unseparated from the twigs, to which it adheres; as *seed-lac*, when separated, pounded, and the colouring matter extracted by water; *shell-lac*, when strained, and allowed to harden in the form of thin flakes, or laminæ. Besides the use of lac in the composition of varnishes, &c., its colouring matter, under the name of *lac-lake*, and a still superior preparation, called *lac-dye*, is employed as a substitute for cochineal, in dyeing scarlet. Kirby observes, "that the East India Company are said to have saved in a few months £14,000 in the purchase of scarlet cloths dyed with this colour and cochineal conjointly, and

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without any inferiority in the colour obtained!"

The insect, *coccus lacea*, which produces an article thus important in a commercial point of view, is found in almost incredible abundance on various trees, the juices of which constitute their food; of these two species of fig, the *ficus religiosa* and *ficus indica* seem the chief. "When the females," says Kirby, "have fixed themselves to a part of the branch of the trees on which they feed, a pellucid and glutinous substance begins to exude from the margins of the body, and in the end covers the whole insect with a cell of this substance, which, when hardened by exposure to the air, becomes *lac*. So numerous are these insects, and so closely crowded together, that they often entirely cover a branch; and the groupes take different shapes, as square, hexagon, &c., according to the space left round the insect which first began to form its cell. Under these cells the females deposit their eggs, which, after a certain period, are hatched, and the young ones eat their way out. Though indisputably an *animal secretion*, many of the properties of *lac* are not very different from those of the juices of the trees on which the animal feeds, and which, therefore, would seem to undergo but little alteration." How minute, how feeble are the agents by which man is benefited; on looking at them, we should be ready to say, Of what use are these in creation! Yet arts, manufactures, and commerce, are dependent upon them. And though it may enforce upon us a lesson of humility, still we need not be surprised, since we ought to remember that, by the permission of God, agents as feeble as these have desolated kingdoms; why, then, should they not, by his appointment also, be constituted so as to confer on mankind services connected with his social interests, and the general good? M.

OLD HUMPHREY ON THE DUTY OF MAKING A WILL.*

When a prudent merchant consigns a vessel to the watery deep, he is mindful of the dangers it has to encounter, and accordingly, by insuring the cargo, he seeks to protect himself and all others interested therein from loss. And is the voyage of life less dangerous than a voyage over the deep? Is an immortal soul of less value than hogsheads of hardware and bales of broad-cloth? Surely, as tempest-tost mariners, we ought, first, to secure ourselves from loss, by seeking a well grounded hope of eternal life through Jesus Christ; and, secondly, to protect those dear to us from sustaining injury by our death, by making prudent arrangements in the event of our departure.

You may say that this, or something like it, has been said a hundred times over; and no doubt it has, and likely enough it has been repeated a hundred times more, but if I am not to speak till I say something absolutely new, I must become dumb. If I write no more till I can produce some striking novelty, my pen need no more be dipped into my inkstand. Experience will bear me out in the remark, that wisdom consists much more in impressing the minds of others with well-known truths, than in the production of novel opinions. They may be presented in a different form, yet are they essentially old. Though by shaking the kaleidoscope you obtain a new form, the materials which compose it are always the same.

But though my present observations may not be entirely new, I feel such a warmth gathering round my heart while I write them, that I do verily persuade myself that my remarks will meet the eyes of those who will not despise them; nay, more, that there are some who will regard them with favour, read them with respect, ponder over them with attention, and practise what they recommend.

Do I speak proudly? No! no! Proud I am, to my reproach, but not at this moment. High-minded I may be, but not now. If I can see my own heart through its manifold infirmities, its present object is simply and singly to drop a seasonable word, which, with God's blessing, may take away from a death-bed anxiety and confusion, and add something to the comforts of the widow and the fatherless.

I have been reading over again, for the fourth or fifth time, a little book called "Testamentary Counsels," and much of what I have to say has been taken

* We beg to remind our readers that the new law respecting Wills, which is now in force requires—
1. The will or codicil to be signed at the foot or end thereof by the testator.
2. If he does not sign, it must be signed by some other person in his presence, and by his direction.
3. The signature must be made, or acknowledged by the testator, in the presence of two or more witnesses present at the same time.
4. The witnesses must attest and subscribe the will or codicil in the presence of the testator.

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from that volume, or suggested by it. Old Humphrey is under great obligations to wiser and better men than himself, whose writings have often come home to his heart, sometimes pouring a cordial into it that it greatly needed, and sometimes planting an arrow there that was needed still more. On such occasions he has felt drawn towards the writer with cords of affection, and longed to shake him by the hand, especially if his spirit appeared influenced by kindness rather than severity. It may be that you have felt a little of this drawing towards me; you have not pictured me with a frowning brow and a churlish heart, but rather as one, who, being feelingly persuaded of his own infirmities, looks on his fellow-sinners with tenderness and affection. May you, in this instance, not be wrong in your conjectures!

I have before me a very important object, and as a man can hardly be expected to do a thing in a tolerable manner unless he go about it in his own way, I want you to bear with me a little, and to be somewhat indulgent to me. Let an old man have his old fashions.

I shall not beat about the bush, but ask you a plain question at once, in my customary downright way. I am not about to say that I hope you have done this, and I trust you have done that and the other; my question is, Have you made your will? If you have, and if you have made it conscientiously and prudently, my inquiry will not annoy you; but if you have not, I wish it to stick to you like a leech, and to sting you like a nettle.

You may be among the many who habitually put off till to-morrow what ought to be done to-day, and if so, no doubt you will have plenty of reasons to assign for procrastination. Making a will, you may say, is an important thing, and requires much reflection: you have a friend to consult; you quite agree that it is necessary, and, indeed, you have been thinking of it for some time; it is, really, your intention to be in earnest about the matter. But all this is very like shuffling. These lame attempts to excuse the non-performance of an imperative duty will not parry my home-thrust—Have you made your will?

I wish my words to go to your very heart; yet, far be it from me to bluster and call you names, even if you have never thought of making your will. It would but ill become one whose infirmities cling to him as a garment, and who sensibly feels his own backwardness in the discharge of manifold duties, to indulge in bitterness against a procrastinating brother. Rather would I, in an affectionate spirit, point out how cruelly you are acting to yourself in thus gathering thorns for your dying pillow.

If you have a wife and children, and relations and friends, I suppose that you bear them some affection; and if so, surely you had rather they should dwell in peace than in discord, and that if they should outlive you, they should love rather than hate your memory. By making a will, you will prove that their welfare is an object of your desire; by neglecting to do so, you will show that their happiness is with you an object of very little consideration.

Many, very many, tremble at the very thought of making a will. Some time ago, a worthy woman was bereaved of her husband; he was taken suddenly away, as many are. The widow was anxious that what property she had should be enjoyed after her decease by two nieces, to whom she was much attached; but this was not likely to happen unless she made her will, and to this she had a strong objection. It was in vain that her professional adviser urged her to bequeath her property, and pointed out that if she neglected to do so, it would go to one who was unworthy to enjoy it; still she could not bear the thought of making a will. While in the office of her professional friend, she trembled from head to foot with apprehension; and when the will was sent home to her, terror again prevented her from signing her name to it. Superstitious fears bind many in iron chains; the widow thought signing her will was like signing her death-warrant; and even though her life was soon afterwards placed in jeopardy by a sudden fire, which burst out where she lived, her last will and testament was unattended to: neither her danger nor her merciful preservation influenced her to sign her will.

You will not die sooner for having made your will, though the distraction arising in a season of sickness from not having made it may fever your mind and your body, and hurry you off to your grave. I speak with reverence, and under submission to the Divine will. *Now* you may bear my inquiry; but if it should only be whispered by your doctor

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into your dying ear, it may fall like a thunder-clap on your aching head at a season when you would give the world to do what you may be incapable to perform.

Think, for a moment, on his situation, who, having for years added house to house, and field to field, and laid up large stores for earthly enjoyment, without a thought of dissolution, if suddenly called upon in a hurry to divide his possessions! Not an hour can he purchase at any price. The fever is upon him, his blood-shot eye looks fearful, he draws his breath with difficulty, his pulse is at a hundred and twenty, he cries out for water, and turns to his physician for comfort; but, as he strains his aching eyeballs in an attempt to catch a word of consolation, he meets the inquiry, "Have you made your will?" The very words are the icy wind of death; they chill and curdle the life-current of his heart; they pronounce his doom. Oh that he had made his will, it would have been some consolation; it might have prevented his present paroxysm; but, no! he neglected it, and now it is too late.

I hope that you will not be ranked among those

> "Who toil for heirs they know not who,
> And straight are seen no more."

"Beware of covetousness!" Hoard not up guilty riches to your condemnation. Let not your growing possessions be witnesses against you at the final hour. A coffin full, yea, a grave full of gold will not gain you admittance at the gate of heaven. Whether you think so or not, you are but a steward over your earthly possessions; your stewardship extends to the proper use of wealth during your life, and the just distribution of it at the time of your decease. Be not an unjust steward; whether you have ten talents or five committed to your care, use them profitably, and make your will, that your property may be rightly distributed after your death.

Perhaps you will be turning round to me to inquire if I have made my will, and if you do, a plain answer shall be given. It would be a little out of character in me to talk of freeholds and funded property, of Scotch and Irish estates, of shares in the mining, dock, and rail-road companies. I need no steward to manage my affairs. The largest park I have will not occupy me long in riding round it, and my habitation is not at all likely to be mistaken for Apsley-house or the mansion of the Marquis of Stafford; but the small portion of this world's gear that I may call my own is conscientiously allotted in case of my departure. Sometimes I am foolish enough to wish for wealth, for there are acts of friendship that I would requite, and feelings of affection that I would willingly embody in actions, but as a Scottish writer has well expressed himself, "God kens what is good for us better than we ken ourselves."

To say nothing of other things, Old Humphrey has received so many acts of individual kindness, that he would much rather devote a dozen skins of parchment to their acknowledgment and liquidation than that his will should be cribbed up into the contracted space that it now occupies.

You know as well as I do that our life is but "a vapour;" you know that what with natural decay, accidents, and the "thousand ills that flesh is heir to," there is "but a step between us and death." If then the message should suddenly be signified to you, "This night thy soul shall be required of thee," should you be satisfied to leave what property you have, be it little or much, without any arrangement as to its distribution? Now be honest to yourself; put the question to your own heart, and give an honest answer. If you can add to the comfort and peace of your wife and children by doing what you have hitherto delayed, set about it. It will break none of your bones to make your will; it will not disturb your night's slumber, but on the contrary, minister to your repose.

If you have a wife that you love, make your will, lest she fall into the hands of those who may treat her harshly. If you have children that you love, make your will, that they may be guided as to the portion that falleth to them. If you have poor relations, make your will, that you may not, in shutting up your bowels of compassion against them, and neglecting them, do an act of injustice; and if you have faithful servants, who are not only worthy of their hire, but of your respect, make your will, that they may know you have not been unmindful of their fidelity.

It may be that God has blessed you abundantly in worldly goods; and if so, it will especially become you, living and dying, to remember his cause and to promote his glory. There are religious

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institutions, without number, that require assistance, and benevolent societies almost standing still for want of aid. I will not tell you that your money, give of it what you may, and in what manner you choose, will convert a soul, or restore a languishing body from a couch of sickness, but I say that you ought gladly to give; and highly honoured will you be, if God of his graciousness and condescending mercy shall be pleased to accompany your gift with his blessing to the souls and bodies of his creatures.

It is not my object to tell you *how* you should make your will, but only to convince you that you *ought* to make it; for the former purpose the little book of which I have already spoken will give you excellent counsel.

I hardly know whether I should succeed if I were to attempt to pass myself off as being very learned in the law. I might begin by telling you that "wills are of very high antiquity," that they were "in use among the ancient Hebrews," that "Jacob bequeathed to his son Joseph a portion of his inheritance double to that of his brethren," and that "Solon was the first legislator who introduced wills into Athens, though in other parts of Greece, and in different countries, they were totally discountenanced;" but you would soon begin to suspect the truth, that Old Humphrey was building on another man's foundation, and affecting to be wise with the knowledge he had filched from another.

The only rule that I will venture to give you in making your will is this; after fervent supplication at the throne of grace for Divine guidance, make it conscientiously, with an eye to futurity, so that if you knew that all your connexions were to meet you at the throne of the Eternal in an hour after your signing, sealing, and delivery, you would not wish it altered.

Great mistakes have been made by many in believing unfavourable reports of their relatives and friends, and allowing prejudices and resentments to influence them in the bequeathment of their property. If you are in a proper spirit for making your will, you will look with a forbearing and merciful eye on all who have a reasonable claim on your remembrance.

Our earthly comfort is greatly promoted by the good conduct of faithful domestics. If you know the value of good servants, you will not be unmindful of them in your will, admitting that, consistently with prior claims, you have the ability to do them a kindness.

"A worthy man had served a country shopkeeper and his son for nearly forty years. He was the tried servant, and esteemed by all the family. 'You shall never want,' was the frequent language of the master. The servant was comforted by the thought, 'that when he was old and grey-headed he should not be forgotten.' His master died, leaving considerable property; but the name of the servant was not found in the will; he was left without provision. Was this equitable, when the master had power to provide for his servant? A small weekly sum would have filled the heart of the old man with joy."

Now do not fall into the error of supposing that a small sum will be of little importance to a faithful domestic. There are times when a single shilling is very valuable to a person slenderly provided for, and to such an one five or ten pounds would be a treasure.

"A woman was once seen weeping at the grave of a worthy female. No one present appeared more deeply affected. 'Have you lost a friend in the deceased?' inquired a person present: 'Yes,' replied the afflicted woman, 'the dear lady was very kind to me; she used to allow me sixpence a week, which procured me many comforts.'"

My poor pen has run on strangely, and yet I appear to have written but a small part of what I intended to lay before you. It may be that after a while I may be permitted to return to this subject again, for it is an important one. In the meantime, if you have a wife and children, be not unmindful of my imperfect suggestions. If you have poor relations, "be ye merciful, as your Father in heaven is merciful," and leave them not without some token of your remembrance. If you have faithful servants, give them reason to bless your memory, and let the kindness of your friends be acknowledged.

If Old Humphrey, in addition to what he has said, should intimate that a faithful minister of Christ, and a conscientious doctor, are entitled to estimation, you will not gainsay his opinion, nor deny that they who minister to the peace and repose of soul and body have a claim on our best regard. If, however, we cannot follow out all our affectionate sympathies, let us, at least, not on this account neglect our positive duties.

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Philippa. Edward III. The Black Prince.

ENGLISH HISTORY.

Edward III.

When this prince was raised to the throne, A.D. 1327, by the deposition of his father, he was under the age of fourteen, so that he had no share in the guilt of those who contrived the murder of that wretched king. Nor was he allowed to exercise any power. The regency devolved on a council of twelve distinguished personages, but the government was almost entirely in the hands of the queen-mother and her paramour, Earl Mortimer. Some popular measures were adopted to secure their power, and the active and unsettled part of the nation were engaged in an expedition against Scotland, to repel an invasion by the Scots, who had broken the truce and devastated the northern counties with a large body of men. Mounted on the rough, hardy little steeds of their country, and unencumbered with baggage, except a bag of oatmeal and an iron plate, upon which to bake their cakes, they moved rapidly from place to place, and baffled their pursuers. When they found cattle, they boiled the flesh in cauldrons, made of the skins of the animals, or roasted it hastily on wooden spits, at fires kindled in the open air. Froissart, a historian of those times, accompanied the English army, and has left a graphic narrative of this expedition, which shows the wretched and wild state to which the border counties were reduced by the predatory warfare then common. When the young prince advanced from York, the Scots retired, and, by the celerity of their movements, baffled their pursuers, and retreated safely into their own country. We can scarcely understand, in the present day, how it was then possible for the English army to seek the Scots ten days in that district without being able to trace them, though close at hand; but such was the wild state of the country, and so imperfect were the arrangements of the leaders. This expedition increased the unpopularity of Mortimer, who was said to have been bribed by the Scots to favour their retreat. Robert Bruce died shortly after a peace had been concluded in 1328, in which the English relinquished their claims to superiority over Scotland, upon condition of receiving the payment of 30,000 marks.

When sixteen years old, Edward married Philippa of Hainault, a union planned some years before. His chivalric deportment and popular manners caused him to be generally esteemed, while the general dislike to the queen and Mortimer was increased by the pride and folly of the latter. Among other measures to support his power, Mortimer

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caused the Earl of Kent, the uncle of the king, to be put to death on a false charge of treason. This displeased the king, and, on arriving at the age of eighteen, when by law he was no longer subjected to others, he determined to rescue himself and his country from the rule of the queen-mother and her favourite. A parliament was held at Nottingham. Isabella and Mortimer were in the castle with their retainers, but the young king obtained admittance in the night for a party of his supporters, by a passage in the rock, which still exists. They seized the guilty earl, who was accused before the peers, and, without hearing a witness, found guilty and executed. Isabella, who had vainly interfered to save her paramour, was kept under restraint at Risings, in Surrey, during the remainder of her life, which lasted twenty-eight years; the king occasionally visited his mother, but she was detained in confinement, and she thus found that the results of crime are bitter even in this life.

Edward now assumed full authority, much to the joy of his subjects. His first exertions tended to promote the welfare of his people, but military and chivalrous feelings soon led him to interfere with Scotland. The conditions of the late treaty had not been faithfully performed, and this gave a pretext for hostilities in 1332. David, the son of Robert Bruce, was dethroned, and a son of Baliol made king in his place; but he was soon driven into England, and Baliol then invaded Scotland. A decisive victory at Halidon, in 1353, replaced Baliol on the throne, when he acknowledged Edward as his superior, and gave up the southern counties of Scotland. Still the nation was not subdued, and the land was desolated during the years that followed, till the ambition of Edward was directed to a more splendid prize, the crown of France.

The claims of Edward to the French monarchy were through his mother Isabella, the daughter of Philip IV., and sister to three successive kings, Lewis X., Philip V., and Charles IV.; the last of whom died in 1328, and none of whom had left any sons. A law of France, called the salic law, excluded females from an inheritance, on account of the inability of women to perform feudal duties, and the crown was adjudged to Philip de Valois, the nephew of Isabella, and son of her father's brother. This excluded Edward and his mother, as well as Jane, the daughter of Lewis X., whose claim, in point of kindred, was preferable to that of Isabella; but Edward admitted the authority of the salic law, as excluding females; yet he asserted his title to the throne, being able, as a male heir, to perform the necessary duties. This statement shows that Edward had no right to the crown of France, for the succession to a kingdom should be settled by its own laws, and these excluded him. But an ambitious mind was easily led to desire the crown of France; and from the death of Charles, in 1328, he directed all his measures to accomplish this darling object of his desires, forgetful or ignorant of the woe denounced by the prophet against "a proud man, who keepeth not at home, but enlargeth his desire as hell, and is as death, and cannot be satisfied, but gathereth unto him all nations, and heapeth unto him all people." Habak. ii. 5.

In 1336, when Edward was twenty-six years of age, he quartered the lilies of France with the arms of England; and making a public avowal of his claims, proceeded to enforce them. His preparations were extensive, and planned to insure the attainment of his object. Numerous arrangements were made with the princes of Germany and Flanders; and in September, 1339, Edward marched from Valenciennes to invade France, expecting that Philip would give him battle; but the season for operations in the field had nearly closed, and Philip, finding that his opponents had exhausted their resources, by ravaging the country through which they passed, after pretending to prepare for fight, fell back, and made it necessary for them to do the same: such was the mortifying result of the first campaign, and it might have convinced any one less blinded by ambition of the futility of his schemes. This fruitless campaign exhausted King Edward's resources, and he was obliged to apply to parliament for aid, which was unwillingly granted. He had recourse to additional measures, borrowing large sums of money from foreigners, seizing the goods of merchants, and even pawning his own crown jewels. One method that he adopted of raising money was unobjectionable, namely, giving liberty to some of the servitors or slaves of the crown, for a sum of money. He also lowered the standard of the coin,

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and thereby, in effect, robbed thousands of his subjects; and as to foreigners, the most wealthy Florentine merchants, who had assisted him with money, were so involved thereby that they failed, and in their turn ruined a large portion of their fellow-citizens.

The year 1340 was distinguished by a great naval victory over the French, in which 200 vessels of the latter were taken, and 30,000 men destroyed; as Turner well observes, "a dreadful consumption of human life, that one individual king, already lord of a noble country, might also have the sovereignty of another." The attack of the English upon the French was unprovoked; yet after this wholesale murder, for such in the sight of God it must be esteemed, Edward knelt down and thanked God for his success, and directed a national thanksgiving; but such sacrifices as this must be hateful to the Lord, and such prayers cannot be accepted by him as was the incense of old, offered up by undefiled hands.

Another land campaign followed; but after a long and unsuccessful siege of Tournay, Edward found himself obliged to retreat, and was glad to conclude a truce with France. He returned to England in a gloomy mood, and quarrelled with his ministers. Archbishop Stafford, the lord chancellor, had promised to supply the king with funds for his military expenses, but he was unable to raise the amount. He was displaced, and then endeavoured to stand upon his ecclesiastical authority and privileges, but he was obliged to humble himself before the king, and to sue for pardon and favour. This campaign had, however, been fortunate to some of the royal followers. Sir Walter Manny took prisoners of rank, for whose ransom he received 100,000*l.* He was a courageous knight and a successful leader, particularly in predatory expeditions, or, in other terms, in robbery.

Another occasion for interfering with France now arose. The rival monarchs took opposite parts in a dispute respecting the succession to the duchy of Brittany; but two years of warfare effected little more than the devastation of the country; and similar results attended some military operations in Scotland, undertaken by Edward to support Baliol, who was obliged to retire before his rival David II.

Edward now attempted to attack France from the south, and his generals were more successful in Guienne than he had been in Flanders. In 1346 he landed in Normandy, and ravaging the country to the neighbourhood of Paris, obtained a large booty by the taking of Caen, the inhabitants of which he ordered to be massacred, but was reluctantly persuaded to recal his savage mandate. He then advanced, but finding that Philip was prepared to receive him, he retired towards the Somme, and found French troops occupying the passages of that river. A peasant showed him a ford, by which the English passed, just in time to extricate themselves before the arrival of Philip with his main army. Edward then took up a strong position at Cressy, while the French king was obliged to make a circuit by Abbeville. In the afternoon of August 26, the French army came in front of the English position, and Philip was desirous to halt and rest for the night. He gave orders accordingly; but as the troops in the rear still pressed forward, Philip was obliged to command the Genoese cross-bowmen, who were in front, to begin the attack. Fatigued by a long march, and disordered by a storm, they were unwillingly urged to the onset, and were speedily disordered by the rapid discharges of the English archers. The French knights rode upon the retreating Genoese, and being themselves disordered by slaughtering their own troops, they were speedily discomfited by the English arrows. The combat still was obstinate; the French far out-numbered the English, but they could not rally, and the latter gained a decisive victory. For a considerable time no quarter was given. Twelve princes, 80 bannerets, 1300 knights, and 1500 nobles were killed, with 4000 armed horsemen, and 30,000 private soldiers. Among the slain was the King of Bohemia, who, though blind, had his horse tied to the horses of two of his knights, and rushed into the thickest of the battle, where they were found lying dead together. His military badge of three ostrich feathers, and his German motto, were assumed by the Prince of Wales, who, at the early age of sixteen, took a distinguished part in this battle. On the part of the English, only three knights, one esquire, and a few common soldiers were slain. To account for this disparity, it must be remembered that when the French knights were thrown into confusion,

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and entangled together, their heavy armour rendered it difficult for them to extricate themselves; and this dense body was penetrated by the arrows of the archers, while the light-armed foot soldiers of Edward rushed into the entangled mass with impunity, and, with long knives and daggers, stabbed the helpless warriors. The king of France was wounded, and escaped with difficulty.

Edward was unable to make any other use of this victory than to retire towards Calais unmolested. He besieged the place, and the garrison and inhabitants were reduced to extremity by famine. This carries us into the next year. Seventeen hundred half-famished wretches were driven from the town to save the food that they would have consumed; and the English monarch, with chivalric generosity, gave some food and money to each, and suffered them to depart. This trait is pleasing; but it did not proceed from steady principle, and we find him soon after acting very differently. The king of France in vain attempted to relieve Calais. After having endured a siege of eleven months, the citizens offered to submit, but Edward, irritated at their resistance, threatened to put most of them to death. His knights, however, remonstrated, and declared that they would not fight for him, if he exposed them to the severe retaliations that such conduct would occasion. Edward then consented to spare the citizens, if six of their principal inhabitants presented themselves ready to suffer death. Eustace St. Pierre, one of the wealthiest, generously offered himself, as willing to suffer that his townsmen might be saved; five others came forward, and the relentless Edward ordered them to be hanged, but, at the intercession of his queen, Philippa, consented that they should be suffered to depart. The queen had recently arrived in the camp; she had not long before headed an army to repel the Scottish king, who had invaded England. He was defeated, and taken prisoner at Neville's Cross, so that Edward was now victorious over both his opponents, and returned to England, where he found the nation almost wild with the success of his arms, but so exhausted by the cost that he consented to a truce with France.

Edward was now occupied in the revelries and pursuits of chivalry, and it is said that at this time he instituted the order of the garter. He desired to emulate the fabulous tales respecting king Arthur, by the institution of this order of knighthood; and by frequent tournaments, and similar entertainments, he kept up the spirit of chivalry. An instance of the practical application of these principles occurred at this period. Aymeric, a noble Italian, who had been appointed governor of Calais, agreed to betray it to Philip. This treachery was discovered to Edward, who promised pardon to the governor if he would continue his correspondence with the French king, but repaired to Calais with a body of knights, and sallied forth upon the party sent by Philip to be admitted into the place. He exposed himself personally in the attack, and was twice unhorsed by a knight named Ribaumont, but at last took his assailant prisoner. Edward then rewarded the treacherous Ribaumont with a string of pearls, though he would have hanged those who on a former occasion had faithfully defended the city against himself. The French inhabitants of Calais were removed from the town, and their places supplied by English settlers. It became a town of considerable trade, and for two hundred years remained in the hands of the English, affording at all times a ready access to the continent.

The revelries and sportive scenes which had lately abounded in England were followed by a dark time of trial. Another of the four sore judgments of the Most High was sent upon the guilty nations of Europe. The sword had long been unsheathed to devour, but monarchs and subjects had alike gloried in the work of slaughter and destruction, instead of considering it a judgment for sin. Famine had often weakened the nations, and now pestilence was commissioned to destroy. A mortal contagion, called "the black death," began in Asia, about the year 1346, and advanced towards the west, destroying millions in its course. In 1350 it commenced its ravages in England; and before it ceased, a third, some state a larger number, of the inhabitants were swept away. In the large cities, such as London, the ordinary burial places were not sufficient for the corpses. Sir Walter Manny gave a piece of ground, afterwards the site of the Charter-house, to the citizens of London for a place of interment, and more

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than 50,000 bodies were buried there. So direful were the effects of the pestilence, that the proceedings of the courts of law were stopped, and the sitting of parliament was closed. Churches were left without priests, the land remained uncultivated, and every species of disorganization prevailed. The Scots heard of the afflicted state of England, and crossed the borders to devastate the northern counties; but the destroyer struck them also; 5000 soldiers perished by the pestilence, and the survivors disbanded in haste. The whole of Europe suffered in like manner with England. In many respects, particularly in the suddenness of the stroke, the course in which the disease advanced, and the extent of its ravages, "the black death" resembled the cholera, which has spread so widely in our times. We should ascribe it to the interference of the Most High if the mortality has not been so great; for, although the modern habits of cleanliness, and prompt succour to those attacked by the pestilence, have in some places been instrumental to check its ravages, yet the closest investigators of the subject will admit, that in many instances no human wisdom or skill could baffle the direful malady, which was stayed in its course by an almighty, though unseen Power, at the time when it appeared triumphing over every effort used to stay its course. As when the angel stretched his hand over Jerusalem to destroy it, "the Lord commanded the angel, and he put up his sword again into the sheath thereof," 1 Chron. xxi. 27.

The extent of the mortality from the "black death" is shown by the advance in labourers' wages, which increased fourfold, from five-pence to twenty-pence a day in harvest. The legislature interfered in vain to limit the amount paid for labour; an absurd and injurious interference, which in the end always defeats itself. All regulations of this nature, whether intended to raise or to depress, have always proved equally injurious to the employer and the labourer. In the same manner, as the mortality of the priests was proportioned to that of the people, the demand of the survivors rose in proportion. The parliament endeavoured to prevent this, and thus the ministrations of the churches in many instances devolved on persons more ignorant and vicious than the generality of the Romish clergy had hitherto been.

It is painful to observe how these providential visitations are usually disregarded by the mass of the people, who appear alarmed while the sword hangs over their heads, but become more careless than before as soon as it is removed. Yet such an event will call forth some individuals to think for themselves, and to labour earnestly for the good of others. Though the pestilence seemed to increase the prevalence of superstition and profligacy, it appears, on the other hand, to have been instrumental in rousing the mighty mind of Wickliff to observe the awfully depraved state of the church, and of the professedly Christian world at large. He was much excited by the disgraceful proceedings of the monkish orders, which were promoted by the removal of so many of the regular clergy, and the superstitious feelings arising from the plague.

Before we leave this subject, we must notice the death of Bradwardine, whose piety and attainments appear very evident in his writings, and are very remarkable in those dark ages. He was born during the reign of Edward I.; he attended Edward III. in his French wars, and often preached before the army. We are told that "he made it his business to calm and mitigate the fierceness of his master's temper, when he saw him either excited by warlike rage or improperly flushed with the advantages of victory." He was afterwards made archbishop of Canterbury; but he died a few weeks after his consecration, and, doubtless, removal from this world was "gain" to him. The following is an extract from a work in which he maintains the doctrine of a universal decisive Providence, and exposes the absurdity of the common language of men respecting fortune or chance. "He who excludes from his creed the view of Divine Providence disposing of all events, not permissively, but actually, removes, so far as in him lies, from every troubled person, the greatest encouragement to patience, hope, consolation, and joy. Who will serenely bear adversity, if he believe it to proceed from chance, or ultimately from an enemy; and if he do not know that it really proceeds from, and is guided by the unerring direction of the all-wise God, who, by means invisible to human sight, purges sins, exercises virtues, and accumulates rewards? He, doubtless, who does thus believe in Divine

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Providence, has every advantage for patience and composure of mind, because he knows that all things work together for his good. Thus rough places are made smooth to all the saints of God, hard things are softened, the edge of suffering is blunted, and bitter things are tempered sweetly; and thus a singular solace, a principal and a never-failing refreshment, in all adversities, is provided for me, a sinful worm. With what patience may all disagreeable events be endured by the man who fears and loves God, and firmly believes that the great and wise Being, who can require nothing but what is good and wise, actually requires him to bear such things! This I think is to make the Lord's 'yoke easy, and his burden light.'"

The writings of Bradwardine were adapted for the scholar, not for the mass of the people; but in this way they were instruments of good. They influenced scholars; and Wickliff and his associates came forth, and spoke to the hearts and feelings of the community at large. Bradwardine was called "the morning star of the reformation in England," and we shall soon have to notice the dawn.

(To be continued.)

TEMPORAL BENEFITS FROM MISSIONARY EXERTIONS.

In reference to the South Sea islands generally, it may be observed, that the blessings conveyed to them by Christianity, have not been simply of a spiritual character; but that civilization and commerce have invariably followed in her train. This, will, perhaps, be still more evident by the following concise enumeration of the useful arts, the animals, and the vegetable productions, which have been introduced by the missionaries into the various stations they have occupied.

Useful arts: smith's work, house building, ship building, lime burning, turning; sofa, chair, and bedstead making; growth and manufacture of tobacco, sugar boiling, printing.

Vegetable productions: a variety of valuable esculents, pumpkins, melons, sweet potatoes, &c.; oranges, lemons, limes, pine apples, custard apples, coffee, cotton, indigo.

Animals: goats, sheep, horses, asses; cattle and pigs into several islands; turkeys, geese, ducks, and fowls.

Upon these statements a few observations may be necessary. In communicating to the people the useful arts specified above, I have spent many hundreds of hours, not merely in explaining and superintending the different processes, but in actual labour. For this, however, I have been amply repaid by the great progress which the natives have made in many of these departments of useful knowledge, but especially in building small vessels of from twenty to fifty tons. More than twenty of these were sailing from island to island when I left, two of which belonged to the queen, and were employed in fetching cargoes of pearl, and pearl shells, from a group of islands to the eastward of Tahiti. These were exchanged with the English and American vessels for clothing and other articles.

The manufacture of sugar is increasing rapidly. I speak within compass, when I say, that during the year I left, upwards of a hundred tons were exported from Tahiti only. The culture of tobacco was completely stopped, as I have already stated, by the prohibitory duty which the selfish and shortsighted merchants of New South Wales persuaded the governor to impose upon that article.

Cattle were left by captain Cook at Tahiti, but they perished; and those from which the islands have been stocked were conveyed by the missionaries. When I visited New South Wales, His Excellency, Sir Thomas Brisbane, kindly gave me several. Some of these our invaluable friend, the Rev. S. Marsden, exchanged for others of his best Yorkshire breed, which have multiplied exceedingly at Raiatea and Rarotonga.

Several of the vegetable productions were introduced by captain Cook, and we have not only added many others, but conveyed those left by him to islands which he did not visit. Wheat cannot be grown in the islands. English potatoes will not propagate themselves. Cabbages do not seed, but we can preserve them by planting the sprouts. We have tried many of the English fruits, but without success. A solitary strawberry once came to perfection, and we divided the precious morsel into three portions, Mrs. Williams, myself, and our son taking each a share. Seeds of the indigo

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plant were furnished us by captain Laws, of H. M. sloop, Satellite, and we doubt not but that this will shortly become an article of great commercial importance. Coffee plants were conveyed by the missionary ship Haweis, from Norfolk Island, and are now growing luxuriantly. Several of the trees have borne for some time past; and I firmly believe that, in a few years, cargoes of coffee, as well as of arrow-root, cocoa-nut oil, and sugar, will be shipped by our converts at the missionary stations in the South Sea islands. Ought not a great and mighty nation like England, with the generosity which is allied to true greatness, to put forth her hand, and help her infant offspring, which has been raised from barbarism, and brought into national existence, by the benevolent efforts of her own subjects, especially as her own beloved sovereign is styled the protector of the Polynesian isles?

From these facts it will be apparent, that, while our best energies have been devoted to the instruction of the people in the truths of the Christian religion, and our chief solicitude has been to make them wise unto salvation, we have, at the same time, been anxious to impart a knowledge of all that was calculated to increase their comforts, and elevate their character. And I am convinced that the first step towards the promotion of a nation's temporal and social elevation is, to plant amongst them the tree of life, when civilization and commerce will entwine their tendrils around its trunk, and derive support from its strength. Until the people are brought under the influence of religion, they have no desire for the arts and usages of civilized life; but that invariably creates it. The missionaries were at Tahiti many years, during which they built and furnished a house in European style. The natives saw this, but not an individual imitated their example. As soon, however, as they were brought under the influence of Christianity, the chiefs, and even the common people, began to build neat plastered cottages, and to manufacture bedsteads, seats, and other articles of furniture. The females had long observed the dress of the missionaries' wives, but while heathen they greatly preferred their own, and there was not a single attempt at imitation. No sooner, however, were they brought under the influence of religion, than all of them, even to the lowest, aspired to the possession of a gown, a bonnet, and a shawl, that they might appear like Christian women. I could proceed to enumerate many other changes of the same kind, but these will be sufficient to establish my assertion. While the natives are under the influence of their superstitions, they evince an inanity and torpor, from which no stimulus has proved powerful enough to arouse them, but the new ideas and the new principles imparted by Christianity. And if it be not already proved, the experience of a few more years will demonstrate the fact, that the missionary enterprise is incomparably the most effective machinery that has ever been brought to operate upon the social, the civil, and the commercial, as well as the moral and spiritual interests of mankind.

Nor are the heathen the only parties benefited by such exertions. The whole civilized world, and our own countrymen especially, share the advantages. Without dwelling upon the improved state of religion in our churches; the holy and elevated feelings which have been called into exercise; the noble instances of Christian benevolence which have been displayed; and the reflex influence of the missionary enterprise upon home exertions; we may simply glance at the commercial advantages which have resulted, and are still resulting from these labours. In the South Sea islands alone, many thousands of persons are at this moment wearing and using articles of European manufacture, by whom, a few years ago, no such article had been seen; indeed, in the more advanced stations, there is scarcely an individual who is not attired in English clothing, which has been obtained in exchange for native produce. Thus we are benefited both in what we give and in what we receive. From a barbarous people very little can be obtained, and even that at the greatest possible hazard. When a vessel enters their harbours, every precaution must be employed. She is encircled with netting half way up the rigging, her guns are loaded, and every person on board is obliged to be on the alert, fearing an attack, and not knowing the moment at which it may be made.

Besides these dangers, the natives, in a barbarous state possess not the knowledge requisite for turning the capabilities and productions of their islands to

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good account. The sugar-cane was indigenous to Tahiti; but it is only since the inhabitants have been christianized, and taught by the missionaries, that they have manufactured sugar, and thus converted the cane into a valuable article of commerce. At present, the Samoa islanders have nothing to dispose of but a little cinet,* and small quantities of tortoiseshell. In a very few years, however, should our labours be successful, they will be taught to prepare hundreds of tons of cocoa-nut oil, and large quanties of arrow-root, annually; to manufacture sugar; to cultivate their land; and to supply our shipping with provisions. Thus, wherever the missionary goes, new channels are cut for the stream of commerce; and to me it is most surprising that any individual, at all interested in the commercial prosperity of his country, can be otherwise than a warm friend to the missionary cause.

The shipping of our country, too, derive as much advantage from missions as its commerce. This will appear, if it be recollected, that intercourse between Europeans and the untaught islanders of the Pacific, is always dangerous, and has often proved fatal. The adventurous Magelan fell at the Ladrone islands; captain Cook was barbarously murdered at the Sandwich group, the ship Venus was taken at Tahiti; M. de Langle and his companions were killed at the Samoas; the Port au Prince was seized at Lefuga; and the crew of the Boyd was massacred at New Zealand. And now, at all these islands, with the exception of the Ladrones, there are missionary stations, whither numbers of vessels direct their course annually, the crews of which look forward with delight to the hour when the anchor shall be dropped in the tranquil lagoons, and they find a generous welcome and a temporary home. That outrages do still occur where there are no missionaries, captain Beechy's account of his intercourse with the inhabitants of Easter and Gambier islands, and the massacre of the entire crew of the Oldham, at Wallace's island, with other similar events of more recent occurrence, plainly demonstrate; whilst the fact, that, in those islands, or ports, where missionaries are settled, such acts of violence have been prevented, is established by evidence equally decisive.—*Rev. John Williams.*

* Cord made from the cocoa-nut husk.

HAT MAKING.

We propose, in a series of papers, to describe the manufacture of the most important articles of clothing. We are not acquainted with any general and popular descriptions which would enable a person to inform himself about those manufactures which he may have no opportunity to examine. Strange as it may appear, there are but few persons, except those engaged in the several branches of trade, who could give an account of the manner in which the material of any part of their clothing is made. They would perhaps even laugh if a stranger, unacquainted with our garments, were to ask them, By what process is the material of your hat, shoes, or coat, constructed? It is our intention to give such explanations as shall enable the reader to answer such a question.

We begin with a description of the manufacture of hats—a useful and necessary part of clothing to a people who live in so variable a climate as that in which it has pleased Divine Providence to place us. There are some countries in which the hat is an occasional article of dress; these, however, are but few, for whether the climate be hot or cold, the head needs a covering. Too great an intensity of heat produces fever, and frosts and rains produce colds. There is an old and valuable prescription often mentioned as a means of preserving health, "Keep the head cool, and the feet warm," founded on a just knowledge of the constitution of the human frame. It is, however, frequently misunderstood; it does not mean that the head is to be exposed without protection to all the variations of temperature which overtake us in our changeable climate, or that the feet are to be kept warm before a large coal fire; but that they are both to be kept at a uniform temperature, the feet being warmer than the head. The best way of keeping the feet warm is by regular exercise.

The evidence of design in the construction of the human frame, is not in any part more strikingly displayed than in the form and construction of the skull, which covers that delicate structure the brain, with whose healthy action the power of sensation, and consequently of thought, is so intimately connected. But, although the brain is thus so carefully protected from violent injury and the influence of a change in temperature, the necessity of a covering is evident,

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Hats are of various shapes, and constructed of different materials. It is our principal object to describe the manufacture of those which are now worn, and constructed of felt, though a short history of their introduction into general use may not be uninteresting to the reader. For many of the facts we shall mention, we are indebted to a lecture on the subject, given by Mr. Arthur Aikin, before the Society for the Encouragement of Arts.

The difference between a hat and cap may perhaps be said to consist in the brim: a hat is a cap with a brim. Hats were used by the earliest Greeks; even at the time of Homer, the Dorians wore large brimmed hats when on a journey; and the same practice obtained among the Athenians, as is evident from the equestrian figures on the Elgin marbles. The Romans also wore hats with brims large enough to shade their faces from the sun when on a journey, but usually the head was left uncovered. A corner of the toga, or loose outward garment, was sometimes thrown over the head; but at festivals they wore a bonnet, or cap, which peculiarly distinguished the freeman from the slave.

"In the middle ages, the bonnet, or cap, with a narrow margin in front, appears to have been used among the laity, while ecclesiastics wore hoods or cowls; but Pope Innocent the Fourth, in the thirteenth century, allowed cardinals the use of scarlet hats; and about the year 1440, the use of hats by persons on a journey appears to have been introduced into France, and soon became common in that country, whence probably it spread to the other European states. The cap of the ancients was certainly made of wool, and this, as well as the hat, was probably knit work. When felt was first introduced, as a material for hats, is not known; but it is stated that the hat worn by Charles the Seventh, of France, on occasion of his triumphal entry into Rouen, in 1440, was of felt."

It is well known that the Turcomans cover their seats with felt; and it is not improbable that some of the crusaders, who for a time dwelt with this people, as prisoners of war, may have brought the method of manufacturing felt into Europe. It is, however, usually stated that a monk, who was accustomed to wear some carded wool between the foot and the shoe, found after a time that it had so matted together as to form a solid substance, resembling, in some respects, woollen cloth; and that after his fortunate discovery, he succeeded in the manufacture of felt.

Every one knows that the wool of the sheep will not mat, or, in other words, felt, when in its raw state, that is, so long as the natural oil or greasy matter adheres to it. The reason of this is not perhaps accurately known, but is supposed to arise from the roughness or asperity of the fibres being filled with the oily substance. When a fibre of wool is held by the root, and drawn through the fingers, it passes through without resistance; but when held at the tip, and drawn in the opposite direction, a slight resistance is felt. To account for this, many persons imagine that it is jagged with fine teeth, pointing obliquely upwards. If this be the case, it is easy to imagine that the natural grease of the sheep may fill up the asperities in a raw state, and prevent the matting. But when the wool is scoured, the tendency to felt is very great, so much so that it is necessary to oil the thread before it can be spun. This is also proved by the liability to knotting in flock beds, or mattresses, that is, those which are stuffed with carded wool. Another illustration of the liability of prepared wool to felt is given by a modern author. A piece of woollen cloth, he says, that has undergone no process after weaving, may, without difficulty, be unravelled; but after it has passed through the fulling-mill, it is no longer subject to this action, the filaments of which each adjacent thread is composed being entangled together by a species of felting. The result of this is, that the cloth shrinks in length and breadth, but becomes proportionally thicker and more dense. The higher the heat is to which the cloth is exposed, and the longer it is continued, the more complete does the felting become.

In endeavouring to describe the manufacture of the hat, it will be well to keep in mind that there are two processes altogether distinct from each other; the formation of the body or shape, and the application of the nap. The body of nearly all the hats brought into our own market is formed of felt, and formerly the nap or roughing was beaver, the only difference between one at a high and one at a low price, being in the manufacture. Other materials are,

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however, now used, and there are consequently many kinds of hats. The beaver hat, which is formed of felt and roughed with beaver; the plate hat, which is napped with musk rat; the felt hat, which has no nap; the silk hat, is covered with silk plush; and one which may be called the hemp hat, being almost entirely formed of that material.

It is not so much our object to explain or describe the slight deviations required in the construction of these several sorts of hats, but to convey to our readers a general knowledge of the subject. The description we are about to give has reference to the beaver hat especially, but is explanatory of the general process, whatever materials may be used, and whatever may be the quality of the article produced.

The body of the beaver hat is formed of lamb's wool, or that obtained from the lama, pacos, and other species of the camel, natives of the Andes. The nap is formed of beaver down, generally mixed with the down of the English hare, which is always shaven from the skin, or there would otherwise be the roots preventing the entire union of the two substances.

The workman has first to form the hat, which is done in the following manner. A certain weight of materials, sufficient to construct the hat, in the proportion of a half of rabbit's fur, about a quarter of wool, and the remainder of red wool and carded silk, is given out to the workman. These materials are placed upon a board or bench, about five feet in length, and the rabbit's fur is placed in a heap, over which is slung a large bow, such as that used by violin players, only much larger, being about six feet long, and proportionately strong, with a stout single string. This bow is brought immediately over the heap, and is struck with the thumb, thus producing a vibration, which separates the hairs. When this has been done perfectly, the whole mass is swept away with a wicker frame to one corner of the bench, and the wool is brought forward and bowed in the same manner. The hair and wool are then placed together, and bowed till they are perfectly mixed. They are then spread in an even surface with the wicker-frame, and covered with an oil-cloth, called the *hardening skin;* after which they are pressed by the workman till the fibres intermix, and make a comparatively solid layer. A piece of brown paper, in the form of an equilateral triangle, is then damped, and placed on one side, the edges of the material being turned over upon it. This is done to prevent the matting of the two surfaces. The mixed materials are in this state wrapped in damp cloth, and rolled and unrolled, pressed, bent and folded in various directions, so as to unite the substances more perfectly.

When the *basoning*, as this process is called, has been completed, that of *planking* is commenced; so termed from the place on which the operation is performed. A series of planks, generally about eight in number, are ranged as inclined planes around a lead boiler, containing beer-grounds, sulphuric acid, and water. In France, wine-lees were used instead of beer-grounds, but have of late been rejected; as they were only useful from the acid they contained; sulphuric acid is found sufficient. This compound being raised to the boiling point, the workman, placed on one of these planks, sprinkles the prepared wool and fur, and continually presses them together with a thick piece of leather, which covers the whole palm of the hand. The moisture and pressure together cause a shrinking and thickening of the material, and the more so as it is rolled and worked. It is then dipped into the liquid again, and after the same rolling is again scalded, and, when pressed by an iron rolling-pin, is placed in a stove to dry.

The next operation is that of *stiffening*. A saturated solution of shellac, in spirits of wine, is applied by a brush to the inner surface of the felt; after which it is again placed in a stove; and should any part of the liquid pass through to the other surface, it will cause a roughness, which may be removed by immersion in a hot solution of an alkali or borax, which may be easily removed by a copper scraper. The stoving is then repeated, and any long hairs above the felt are removed by singeing over a fire of wood shavings.

In this manner the substance of the hat is formed; and we now come to a consideration of the process of *napping*. About half or three quarters of an ounce of beaver's fur, and a small quantity of cotton, is bowed down in the manner already described, and a felt, about three inches longer than that of which the body is constructed, is formed. A strip, three inches wide, is then torn off to

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cover the upper part of the brim of the hat. To apply the roughing, the body is first dipped into the boiler, and the nap is fixed in its place with a wet brush; it is then rolled in a hair cloth, dipped into hot liquor, and made to mat with the felt by processes similar to those by which the felt itself is made. We have now the material of the hat, but its shape is conical. The next process is that of *blocking*. By slow and careful means the cone is drawn out into a cylindrical form, and being drawn over a wooden block, is tied to it. The *dyeing* is the next process, which is done by boiling for some hours in a solution of sulphate of iron, verdigris, gall-nuts, and logwood. A deep and permanent black is thus produced. When drained and dried, the goods are taken off the block and sent to the finishing-room. The first process here is steaming over a jet, which softens the hat and renders it very pliable. A piece of scale-board is fastened to the under side of the crown to strengthen it, and a piece of linen is pasted over to keep it in its place. This being done, the hat is placed upon a block, and means are taken to smooth it, that is, to give the nap a uniform direction. It is then trimmed and finished off in that shape which may happen to be at the time most fashionable.

In reference to the manufacture of silk hats, we may be permitted to make one quotation, which will convey to the reader all the information that can be given in this article. "Silk hats, as they are commonly called, were invented some years ago. They are hats with a thin wool body, and a nap of silk. But as silk is not capable of felting, it was necessary to discover some other method of fixing it on the body. After many trials, that which has been finally adopted has been to take the silk manufactured into plush, with a pile of unequal length, and to sow it together into a cover, just capable of fitting the felt body. This latter is then smeared over with an adhesive resinous mixture; and as soon as it has become dry, the bag or cover of silk plush is drawn over it, and fixed firmly to the body by means of a hot iron; it is then finished in the usual way."

There are many uses to which felt is applied. The polishing wheels of those who work in brass are covered with it; and it is a substance precisely suited for the purpose required, as it retains the oily and other substances necessary in the process of polishing. It is also occasionally used as a filterer, for which it is well adapted. But the most important application of felt is to the sheathing of vessels. The copper with which the keel of a ship is covered, is soon corroded by the action of the sea water, and is also in a short time completely covered with shell-fish and vegetable substance, which greatly impede the sailing of the ship. To prevent this, the copper is covered with felt, which, from its very composition, hinders the adhesion of those substances which would otherwise attach themselves to the copper.

"THE WASTED FLOWERS."

"O MAMMA!" exclaimed little George, as he ran to meet his mother and me, as we were approaching him, while he and his little sister were busily engaged in play, "O mamma! Annie has wasted all her flowers! They did not die, but she pulled them to pieces." And so it was, for on coming near to the little girl, we found her sitting on the gravel-walk, weeping bitterly over the still beautiful though scattered fragments of the flowers, which she had in childish wantonness destroyed. Poor Annie! her loss was easily remedied, and her tears soon wiped away by a bounteous, though I thought an injudicious supply of fresh-gathered roses, which, doubtless, ere an hour had passed, would share the same fate, and, perhaps, be wept over with the same sorrow.

As I turned away from the spot, little George's simple words, "Annie has wasted all her flowers," still seemed to ring in my ears, and I thought with grief of how many the same complaint might be made, and how many hearts have had to mourn over the waste of flowers more precious than Annie's. The gracious Sovereign and Disposer of all things has, it is true, appointed this life to be a pilgrimage; yet, in compassion to our feeble nature, he often strews our pathway with flowers, that we may be cheered and refreshed by their sweet fragrance. He gives us not only what is necessary for sustenance, but at times makes the bright blossoms of earthly joy to bloom around us in great abundance. And even those who are led through a more barren and rougher road, may always discover, if they look with faith and patience, some buds of hope entwining with

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the briary fence which encompasses their steps. Yet how daily are these tokens of God's love misused or destroyed; and in our own experience, how constantly do we find that we have ourselves torn to pieces the flowers we tenderly loved.

The blending of soul with soul in friendship; the quiet hours of domestic peace; the ardent glow which thrills the mind on every new intellectual acquisition; and the deeper and higher privilege of communion with a world of spirits, are joys which I doubt not have been felt by many of us; but who can say that they have improved to the utmost these pleasurable feelings which the benevolence of God has provided for our happiness whilst on earth? In the closest friendships there are few who have never, by thoughtless irritability, or careless inattention, wounded the hearts of their bosom friends; and even when this has been guarded against, where is that one who has at all times kept within the bounds of sanctified affection, and made the love of the creature subordinate to the love of God! Surely, when this heart-idolatry is indulged in, we are wilfully wasting our flowers.

Then, with regard to social happiness, how little self-denial do we exercise, how few sacrifices are we inclined to make, in order to keep the blossoms of domestic peace flourishing in their pristine beauty, and how often are they seen to droop and fade under the short yet blighting gusts of selfish contention! Is not this wantonly wasting that lovely flower which was perhaps the first ever bestowed upon man?

I might mention many, many more of the gifts of Providence, which we delight in, and yet sometimes seem bent on depriving ourselves of, such as health, property, the sympathy of others, and those golden opportunities of usefulness which we ofttimes earnestly desire; and yet, when they are given us, suffer to pass away unimproved. But I must leave these, and just for a moment glance at two particular ones, which are, I fear, especially misused. And, first, there are those sabbaths which God has so mercifully appointed for times of rest from earthly cares and anxieties. What an ever-blooming wreath of flowers is hereby kindly woven for us! What a glorious succession of mercies, unceasingly following one another, is thus offered to man, whoever he be, or whatsoever be his lot and condition in life! And are these too wasted? Let each one put the question to his own heart, and call to mind the numerous sabbaths which have been bestowed upon him, and the manner in which their sacred hours have been too often squandered, and he will indeed find that it amounts to a fearful sum of misspent blessings.

One more of Heaven's bright gifts, which is often wasted, I cannot but refer to, and to illustrate this little Annie may again be alluded to. She is an only daughter, the long-wished for child of most affectionate parents. Their eldest child, who was likewise called Annie, died many years ago, and they earnestly longed for another girl to take her name, and to become to them what she was. But for some time it seemed otherwise ordained, and though they had six children, they were all boys, and their parents almost murmured. About four years ago little Annie was born, and hardly ever have the warm feelings of fond parents' hearts been lavished out in more injudicious indulgence than upon this idolized darling. Every wish, every whim is immediately gratified, and not the slightest opposition is suffered to be made to her will; as for any kind of restraint or punishment, it is entirely out of the question. The effects of this foolish education are already perceivable; she is a sweet little affectionate thing when she has her own way; but thwart her inclinations, and violent fits of crying ensue, which are generally ended by yielding to her wishes. From my heart I grieve over that child; she is indeed a lovely flower, intrusted to her parents to be cherished and taken care of, but they seem determined to waste and destroy her loveliness; and if they do not soon see and endeavour to repair their error, they may in future years have to weep bitterly over the blighted appearance of their once promising bud. O, mothers and fathers, watch over your flowers, and suffer them not, either by sinful indulgence, or idle neglect, to grow up into rank and useless weeds.

I feel that I have not nearly exhausted my subject, but I shall conclude by endeavouring earnestly to impress on my own heart, and on the hearts of all who may read this paper, the importance of carefully examining how the varied blessings which have severally been bestowed

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upon us, by the kind bounty of our God, have been received. And if we find, as I anticipate, that most, if not all, of those we have been deprived of, have been lost to us through our own self-will and ignorant folly, let us not mourn over them with repining, uncontrolled sorrow; but watch, lest those that still remain to us should in the same manner be destroyed. Above all, let each of us seek to obtain that inestimable, that best of all the gifts of God to man, even the redemption of his soul through Christ Jesus. Then, whatever may be the disappointments and privations of this life, we shall finally rejoice in that "lovelier Eden above," where, as is beautifully expressed by a Christian poetess,

"Each wound is healed, each want supplied,
Joys given which leave us never;
The heart's deep longing satisfied,
And satisfied for ever."

ELLEN HOWARD.

CHRIST'S PROMISE OF INFALLIBILITY TO HIS APOSTLES.

THAT the reception of the supernatural gifts of the Holy Spirit, with which the apostles were to be favoured, was to stamp infallibility on all that they taught; their Divine Master expressly assures them, "As my Father hath sent me, even so send I you. And when he had said this he breathed on them, and saith unto them, Receive ye the Holy Ghost; whose soever sins ye remit, they are remitted unto them; and whose soever sins ye retain, they are retained," John xx. 21—23. The commission with which they were to be intrusted was equally divine with that which Christ himself had received from the Father. It had, in one point of view, the same object—the certain and infallible communication of religious truth to mankind. As it respects authority, their delegation was upon a par with his own. And, in order that they might not be discouraged by a sense of the disparity which existed between himself and them, with respect to qualifications for the discharge of the office, he once more repeats the promise which he had formerly made to them, accompanying its repetition with an action strikingly symbolical of the nature and manner of its fulfilment. The consequence of their reception of the supernatural influences of the Holy Spirit, was to be the authoritative and irreversible decisions which they would be enabled to give on every point connected with human salvation. Of the various doctrines which this momentous subject involves, our Lord selects one of the deepest interest—the pardon of sin; leaving it to be inferred, that if they were endowed with power infallibly to pronounce who were to be the subjects of that boon, and who were to be denied it, they might well be supposed to be qualified to teach with certainty, and without any admixture of error, every other branch of the grand system of revealed truth. That, by the declaration here made, we are to conceive of any power delegated to the apostles literally and in their own persons to remit sin, would be completely at variance with the whole tenour of the Bible in reference to this subject; such an act being uniformly vindicated to Jehovah as his peculiar and inalienable prerogative. The phraseology is nearly parallel with that which our Lord employs, when addressing Peter as the representative and spokesman of the disciples, "And I will give unto thee the keys of the kingdom of heaven: and whatsoever thou shalt bind on earth shall be bound in heaven: and whatsoever thou shalt loose on earth shall be loosed in heaven," Matt. xvi. 19. Than this no language could more strongly express the plenary power with which they were to be furnished, authoritatively to announce and enforce every thing connected with the kingdom of heaven. Whatever they were to declare to be lawful, whatever they were to teach, permit, or constitute, in the exercise of their apostolic functions, was to be ratified and hold good with God, and, consequently, was to be held sacred by men.—*Dr. Henderson.*

THE BOTANIST.—No. I.

"COMBINED with revealed truth is the evidence of nature on every side, in our paths, our fields, our gardens, our woods; in cultivation and in the desert, in every fibre, root, stem, leaf, flower, or fruit, demonstrating the omnipotent, omnipresent, benevolent God, alluring and compelling our attention, rousing the torpid, and overawing the proud by his terrors, yet cheering those who seek him, with unbounded beneficence, and filling the heart of the humble with rapture and love."—*Duncan.*

"The works of the Lord are great," and over them all are his tender mercies. Their harmony is recognised by the devout mind as the voice of invitation to all, to investigate and admire them, in

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their individual and collective beauty, and in their mutual adaptation for designed and to yield the just tribute of praise and adoration to the wisdom, goodness, and power that first created, and still preserves them. As the works of God, they are all perfect, and in this they differ from the works of man. No rational creature, however intelligent, could find a shadow of fault with what might appear the least perfect, nor suggest in any the most insignificant alteration for the better.

The works of creation are all rendered directly or remotely serviceable to man. Some are essential to his support, others seem chiefly designed to afford him innocent gratification. Now, as none of the objects by which we are surrounded are made in vain, so neither are the faculties with which we are endowed bestowed without design. Why are we taught more than the beasts of the field, and made wiser than the fowls of the air, unless it be that we may employ our superior powers in investigations of which they are not capable? No doubt that we may inquire after God, our Maker, and that his works may be sought out, and taken pleasure in by us; and that thus our minds may be led "through nature up to nature's God."

The branch of natural science to which these remarks are introductory, is Botany. This science is, as it deserves, daily becoming more generally popular as a recreative study; and such are its pleasing results and advantageous tendencies, that we heartily wish the number of its followers multiplied ten thousand times. Can we suppose that the beauties of creation were designed to impart pleasure only to a few? No, not only are they "free to all," but,

"The love of nature's works is born with all,
Is an ingredient in the compound man;
E'en in the stifling bosom of the town,
A garden in which nothing thrives, has charms
That soothes its rich possessor.
It serves him with a hint that nature lives."

Whoever can despise, or affect to despise, the simple pleasures that spring from this source, evinces a mind either perverted by the too close pursuit of some other and perhaps less worthy object, or contracted in its estimate of the relative importance of surrounding objects.

Let us glance at the effects or results of a pursuit of this study. It will not be questioned that it is highly important for us to walk frequently in the wholesome and bracing air, giving the limbs proper exercise, and recruiting the spirits. Now, in the study of this science there will be a continual inducement to embrace opportunities,

"To trip with agile foot the steepy down,
Or velvet lawn,"

to experience,

"The charm
Which morning has that gives the brow of age
A smack of youth, and makes the lip of youth
Shed perfumes exquisite."

But for want of motive or object, the hour of exercise, being determined by caprice or accident, is of seldom and irregular occurrence.

When the mind has been awakened by previous knowledge to a thirst for more information respecting botanical knowledge, every fresh plant will be an object of inquiry and investigation, and every familiar object will excite some feeling of delight. We should also remember, that food and exercise never have so full and salutary an effect as when the mind is pleasingly employed, so that those who are destitute of scientific knowledge do not derive from a walk the full amount even of physical advantage. Another result of the inquiry, if pursued with humility, will be the melioration of the mind and heart. God's works and his word should be studied in connexion with each other; his word is the light by which we read his works, and his works all of them illustrate and confirm his word. There can be no doubt that the disposition of a man is materially characterised by whatever frequently engages his thoughts; and our best feelings and faculties are expanded and invigorated by that wholesome exercise of them which is insured by a contemplation of the works of the Deity. As citizens of the world, it undoubtedly devolves upon us to fill our various stations with fidelity and diligence; but surely that man is to be pitied, whose first and last thoughts are engrossed in the prosecution of schemes for the acquisition of wealth. And it is after all a wretched economy that such a man should covetously and blindly refuse to divide his thoughts with any thing, however excellent in itself, that has not a direct tendency to forward his mercenary views. What is the consequence? Why, in all cases a shrivelled and contracted intellect, which frequently loses all thirst for subsequent improvement. In ten thousand instances a physical de-

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bility, the subjects of which gladly would, if they could, be off their bargain: having given their health for their wealth, they find that they have given the substance for the shadow, and that a great price will not restore that inestimable blessing.

Added to these, how many are the sad cases of mental alienation arising from the same cause, a miserly withholding the energies and intellect from every thing but what is written in the great books of pounds, shillings, and pence.

That man is wise, who, though he pursues his calling faithfully and zealously, yet when nature, exhausted and jaded, requires rest and refreshment, can leave his cares in his counting-house, and in the garden or the fields learn the lesson the lily or the raven can teach, Matt. vi. 26—28; who, remembering his heavenly origin, and his immortal destiny, daily exercises his faculties in observing the works of God around him, and in cultivating intercourse with their great Author. Such an one, however the avaricious may accuse him of throwing away his time, is incomparably better qualified for the discharge of his duties, and will be better able to sustain those changes of circumstances to which all are liable.

May we offer a hint to our fair friends? The beauties of creation are designed for your enjoyment. The invigorating breezes, or the cheering sun-beam, the melody of birds, the opening blossom, painted and perfumed with inimitable skill, the rising hill, the venerable wood, the rippling stream, conspire to allure your feet into the fresh air. Ah! but there are counter attractions in the city or town; the rich display in the mercer's shop, the morning calls, the "see and be seen" promenade, with a long list of other suitors for your favour. What hope of success then have the claims of nature? But, come, give her at least her turn. If you are now intending to pay the mercer an unnecessary call, change your intention, and try the fields, if circumstances will allow; and perhaps in your ramble such a morning call may be made as you will not soon forget. In the cottages of the peasantry, pinching poverty and sickness are often wringing the heart of the inmates; there is a call for sympathy. Of all the many claims upon you, consider well which are the most legitimate and imperative; you cannot answer all; some tend to ensnare your hearts, others to enlarge and expand them; some engender selfishness and pride, others benevolence and lovely humility. There is a school in which you may learn the ways of the world, and a school in which you may learn the ways of God: be invited then to study his works and his ways. As the seasons revolve and bring their objects of admiration, be you attentive observers of them; and in your attempts to do this profitably, we hope to render you some assistance.

Botany

Is a branch of science relating to a knowledge of the vegetable kingdom.

It may be divided into

1. Chemical, or a knowledge of the properties of different plants, whether nutritious as food; medicinal; useful in the arts, as indigo, bark, &c., and poisonous. This branch, therefore, teaches us how to appreciate the different species.

2. Systematic, by which is secured the discrimination or recognition of a plant; without this ability a knowledge of the properties of plants would be of little or no use. For want of this knowledge, individuals have lost their lives by mistaking noxious and poisonous plants for wholesome herbs; and others have administered what they thought to be salutary and restoring medicines, which have proved to be deadly poison.

3. Practical. This includes cultivating, or bringing to the highest perfection, whatever is useful or desirable. Gardening, farming, and planting, are branches of practical botany.

4. Physiological, or anatomical, by which is intended the internal structure and the general economy of vegetables, the nature of their tubes and vessels, manner of growth, &c.

The first branch, it will appear, is work for the laboratory, and belongs more properly to men possessed of chemical knowledge and other requisites for experiment. Yet this branch, as far as known, will be incidentally acquired in the study of the systematic part, and will afford considerable interest.

The second is that on which we intend to enlarge in subsequent numbers.

The third will come only incidentally under our notice at present.

The fourth part, physiological, will be

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occasionally alluded to; it is highly interesting, but difficult in many points, and even by the first professors of the present day imperfectly understood.

Some young persons anticipate difficulty in the hard and outlandish names that are made use of in botany; but let them remember that botany is not the study of names, but of an admirable branch of natural economy; and a hard name does not necessarily imply that the thing so is hard to be understood. The word "law" is an easy word to speak and to remember, but the study of law is by no means a simple process. We remember to have heard of a gentleman, who, when spring-guns became illegal, in order to protect his garden, had this inscription placed on a board, "Terrofiokaibloudomenoi set on these premises." Now the word has no meaning, but the awful length and mysterious appearance of it intimidated some who might have been disposed to enter his premises!

The reason why the Latin and Greek languages are employed in this and some other sciences is, that the same appellatives of plants may be recognised by students of different nations, and that they may be able to read the works written upon these subjects without the trouble and expense of translating and printing in a variety of languages. Wherever it is necessary for the student to acquire a difficult name, it may be learned and remembered by merely writing it over two or three times.

Our next number will contain a table of the classification of Linnæus, and a familiar description of the vegetation of the season.

PROVIDENTIAL INTERPOSITIONS.

The goodness or mercy of God is seen when it interposes for the help of man. The ravens, in a time of famine, bring Elijah bread and flesh, 1 Kings xvii. 6. The story is known how Du Moulin, during the massacre of the Huguenots, in Paris, was cherished for a fortnight by a hen, which came constantly and laid her eggs where he was concealed. Also, how at Calais, an Englishman, who crept into a hole under a staircase, was there preserved by means of a spider, which had woven its web over the hole, and so the soldiers slighted the search there. It is related of Aristomenes, that, being thrown for dead into a ditch along with others, he found his way out by means of a fox which came thither, and pointed a passage out. Lord Mountjoy, coming from Ireland, had perished, together with his ship's company, had not Providence wonderfully preserved them by means of certain sea-birds. Camerarius relates how, in the time of a siege, when the inhabitants, who were sorely pressed by the Turks, placed a large store of bee-hives on the walls of the besieged place, and furiously tumbling down the hives on their enemies, the latter were so desperately stung, that in a pang of indignation they gave up the siege, to the inexpressible joy of the besieged Christians, who were holpen by these new and wonderful recruits! And thus is mercy displayed in the meanest creatures.—*Crane.*

DIVINE ORIGIN OF ALPHABETICAL WRITING.

It is extremely probable that, previous to the giving of the ten commandments, Moses was only acquainted with the hieroglyphic mode of writing, which he must have learned in Egypt; but partly in order to discountenance image-worship, and partly with a view to give facility to the transmission of the truths of Divine revelation, God furnished him, on this occasion, with an important specimen of alphabetical Scripture, and taught him how to compose in it the other laws and ordinances which he revealed to him. At all events, it is certain, we possess no accounts from antiquity which go to show that letters were invented prior to the time of the Jewish legislator; while the concurrent testimony of ancient writers, referring their introduction to some period near to that in which he flourished, corroborates the opinion so naturally suggested by the sacred narrative, that they were of Divine origin.—*Dr. Henderson.*

HOLY GRIEF.

Grieve for nothing in this world so much as for your own sins; and in them for nothing so much as for offending the God of love, and that not only in committing evil, but also in omitting good.

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THE PERAMBULATOR.

WARWICKSHIRE RAMBLES.

It is very sweet to ramble in country places, especially if you have been a long time confined to the city or town; for then the sun appears brighter, the trees greener, and the breeze more balmy and refreshing.

When the heart is rightly toned, it is, as it were, a full cup of thankfulness, which the sight of country scenes makes to run over with praise to the Father of mercies, for the blessings he has so bountifully scattered in our paths.

It may be, that the reader of these remarks may be well acquainted with the fair fields, the fine homesteads, and the beautiful oaks and elms of Warwickshire; he may have wandered, as I did last summer, through the attractive scenery in the neighbourhood of Leamington, and visited the villages around; but if so, he will not, perhaps, object to a retrospective glance, he will not refuse this friendly invitation, to share the company and the converse of the Perambulator.

If you are a stranger to the neighbourhood about Leamington, I hope you will not always remain so. Go to the place in the season of summer, for it will abundantly repay you. Wander through the by-paths and bridle roads, the upland slopes, the woods, and cool meadows, but go not alone! Secure, if you can, the advantage of a kind and christian-hearted friend, fond of rural and retired scenery. With him visit the shadowy nooks, rest on the stiles, and shelter beneath the umbrageous branches of the wide-spreading oak, and when you come to the rippling brook, pause awhile on the stepping stones, and muse on the rippling waters as they win their way over the pebbly shallows. Let it be an unbending hour of tranquil recreation; mark the glittering bubbles, that, like earthly expectations, shine so brightly one moment, and burst the next. Tear up a little paper, casting the fragments on the stream, that you may muse on man as a mariner, sailing down the current of time, and moralize especially on your own little bark, beset with many dangers. It may be that the young dragon-flies, with their network wings, and long slender bodies, may flit rapidly over the surface of the stream, settling now and then on the tops of the rushes; or the humble-bee may pursue his busy course, humming aloud while on the wing, but suspending his monotonous song, if song it may be called, the moment he alights upon a flower; or the butterfly may flutter up and down in the air with a companion, banqueting on pleasure in the sunny beams.

It is pleasant to describe objects while they are visible to us, but being now at a distance from the places which have called forth my present remarks, I must trust to a memory tolerably tenacious with regard to pleasant impressions, to assist me in the sketches of my pen.

Much of the Warwickshire scenery is of that cool, verdant, quiet, and secluded kind, which presents itself to the mind of the biblical reader, when he ponders on the twenty-third psalm, "The Lord is my shepherd; I shall not want. He maketh me to lie down in green pastures: he leadeth me beside the still waters."

It is of a cast calculated to minister to the mind's tranquillity, as well as to that of the body. There are no cloud-capped altitudes and fearful precipices to awe the spirit; no rushing floods and thundering cataracts to excite astonishment and terror. The character of the place is that of repose.

Every Leamington visitor, as a matter of course, frequents the libraries, the pump-room, and the different spas; drinks the waters, takes the baths, rambles in the pleasure-grounds, listens to the band, and gazes on the company. But it is not of these things that I purpose to speak.

Nor have I time to describe that princely pile, Warwick Castle, though the pleasant remembrance of it tempts me to step aside for a moment, to gaze again on its goodly towers, and its picturesque approaches cut through the solid rock, and fancifully adorned with ivy lichens and hanging plants.

The capacious hall is at this moment before me, with the enormous antlers and ancient armour that decorate its walls. The pictures, by Holbein, Rubens, and Vandyke, Poussin, Guido, Teniers, Murillo, and Salvator Rosa, are not forgotten; nor the oak floors, bright and slippery; nor the cedar chamber; nor the high-testered damask-curtained bed of Queen Anne.

In imagination I am gazing from one of the projecting windows, on the broad sweeping branches of the towering cedars, the ruins of the old bridge, the sparkling water-wheel, and the clear

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ripple of the running waters. I have walked with my friends across the extended lawn, and through the gardens, admired the giant geraniums in the green-house, and stand, even now, beneath the ancient bacchanalian vase, in discussion with a talented Italian, while the impatient gardener clanks his keys, to remind us it is time to depart.

But we will bid adieu to the castle, its stupendous towers and embattled walls, and leave the porter in the lodge to astonish the gaping group around him with an exhibition of the armour, prong, tooth-pick, and porridge-pot of the renowned Guy.

Scenes of a striking character that we have gazed on alone, frequently impress us deeply; but when associated with kind friends, and affectionate remembrances, they are graven in our hearts for ever.

Having spoken of a castle still in its glory, let me glance at one in its desolation. If Warwick Castle has its attractions, so has the venerable pile of Kenilworth, though they are somewhat of a mournful kind.

> "If thou would'st see fair Melrose aright,
> Go visit it by the pale moonlight."

And so may it be said of Kenilworth. I have visited the place in company, and mused there alone, both at the midday and midnight hour; when the sun has lit up the extended ruin, and when the moon-beam has silvered its grey turrets and roofless halls.

> Where are the wonted inmates of these walls?
> The brawny arm of strength, the manly heart
> That breasted danger, and the eye that flash'd
> Indignant fire, with all the fairy forms
> That oft have flitted through the festive dance;
> The tongue that told, the ear that drank the strain
> Of love's inebriating melody?
> Long have they moulder'd in the dust of death!
>
> Illustrious ruin! hoary Kenilworth!
> I view thy noble relics with a sigh;
> Thy grandeur and thy greatness are departed;
> Thy tenants have forsaken thee, and hid
> Their faces in the dust, and thou art left
> A mouldering monument whereon I read,
> Not only their mortality, but mine.

I must leave it for another to talk learnedly about the date of the castle, of Geoffry de Clinton, and the monastery of black canons. The princely pleasures of Kenilworth, and the protracted revel given to Elizabeth, must be passed by; but go when you have the opportunity, and gaze on this hoary monument of former greatness, for it is calculated to call forth salutary reflection.

It is a fit place for a perambulator to muse in. When I was last there, the sun shone brightly, and two beautiful dogs were bounding in playful antics, importunate, at times, to share the repast spread on the green turf. A goodly group were seated around me, spell-bound by the piece that I was reading aloud, "The false hopes of childhood." Many a year had rolled away, many a glad and glowing season had passed by since we had met together, but enough:—

> E'en now the noontide glittering sun
> May gild that drear domain,
> But the goodly group of friends are gone—
> When shall we meet again?

Not soon shall I forget my emotions when crossing a large field on my way to Guy's Cliff.

The buoyancy of spirit, and lightness of limb communicated by fresh air, are delightful. Like a stripling I bounded over the iron hurdles which divide the enclosure, with the elasticity of a roe. I felt as one swift of foot, ready to run a race; as a strong bowman, about to cleave the air with a vigorous shaft; as a valorous soldier in a right quarrel, "the battle's bulwark in the narrow way."

Oh what an unspeakable blessing is the breeze of heaven, falling on the fevered brow of one long cooped up in the densely populated city! I drew long breaths for the mere delight of inhaling the grateful, the balmy, the invigorating air, and gazed around with intense delight on the kindling skies, and the blooming earth.

Tell me not that a thrilling susceptibility to the beauties of creation is mere romance; my heart tells me otherwise. It is not adoration, it is not devotion, but when the kindling skies, and the blooming fields, are felt to be His gifts, who gave us all things, even his own Son, to die for our transgressions, a keen conception of the beauty with which he has clothed his "lowliest works," does excite a livelier thankfulness and a warmer praise.

Nor is a high tone of rural enjoyment inconsistent with a lowly estimate of ourselves before Him who has so gloriously adorned the flower, the green herb, and the tender grass. The very magnitude of the gifts of God is calculated to impress the humble heart with its own littleness, so that while it praises God for his goodness, it is ever ready to say, "What is man, that thou art mindful of him? and the son of man, that thou visitest him?"

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The green grass of the extended meadow was grateful to gaze on, the giant oaks spreading their strong arms far and wide, and the towering elms adorned with thick masses of verdure, feathering off into the lightest texture, were goodly spectacles.

On the top of a hedge grew a wild rose, it was truly beautiful; fairer far than those around it. I attempted somewhat rudely to pluck the lovely floweret, but it sprung back disdainfully to its pride of place, leaving a blossomless spray in my hand. I made a reckless plunge, my handkerchief was rent, and a thorn buried itself in my finger; but I won the lovely flower, and wore it in my bosom.

At seasons such as this, we are disposed to pity splendour. What has grandeur and cold-hearted etiquette to offer to a buoyant spirit, revelling in rural enjoyment, and in perfect freedom from restraint!

In a ramble towards Guy's Cliff, a place celebrated for its solitary grandeur and romantic associations, I had three young persons around me; one moment the little girl was in my arms, and in another her two brothers engaged my attention.

Before we came to the water-wheels at the mill, the eldest of the three, a fine, free-hearted boy of nine or ten years, asked me if it was cruel to fish. This was a plain question, but not knowing the views of his parents on this subject, and being unwilling to trespass on the opinions they might have expressed, I would willingly have evaded the inquiry; but young people are not easily shaken off when they make an attack of this kind. The question was repeated. "Is it cruel to fish?" said he, somewhat impatiently, when he perceived that he had no straightforward reply. As no better argument struck me than the one commonly used on such occasions, I had recourse to it.

"Do you think," said I, "that it would be cruel to stick a large hook through you, and pitch you into the water, and fish with you?" He thought it would be very cruel. "Why, then," added I, "it must be cruel to serve the worm so, unless you can prove that he has no feeling, for God made him as well as you; you are both God's creatures, and no one has a right needlessly to injure either of you."

I saw that he was puzzled, and went on thus: "God has given us dominion over the fish, and the fowl, and the cattle for our use, and not for their abuse: the farmer destroys the birds on his cornfields, and the fisherman casts his net in the river, because we have a right to destroy the inferior creatures whenever they annoy us, or when they are required for food; but when you fish, you do it for pleasure only. Now we cannot give unnecessary pain without being cruel. If it be necessary to take away the life of any creature, it should be done without tormenting it; but if not necessary,

"Destroy it not, for all things ought to live,
Take not away the life thou can'st not give."

The conversation here came to an end, but though my little friend was evidently puzzled, I did not read in his countenance any determination to cast aside his fishing rod.

Had Izaak Walton been at my elbow, doubtless with a meek spirit he would have reproved me, and set in array the peaceful seasons, the calm repose, and the profitable contemplations of his brothers of the angle; but though the meek-minded old man could feel for the finny tribe, though he could handle a worm tenderly, and treat him as a friend, I question much if the floundering fish and writhing reptile suffered a whit the less for his sympathy.

Those who visit Guy's Cliff should turn along the path to Milverton Church; for though the pile, with its wooden tower, has but little to recommend it, the green hillocks in the retired churchyard are more impressive than the crowded memorials of a city cemetery. The spot is a secluded one, and the elm trees around it give it a character of rural repose.

I went there alone, and in company. I stood in silence in that treasure-house of death, while a fond and bereaved parent bent and bowed down over the resting-place of a beloved child. To her the spot was doubly dear, and to any one reproaching it as a gloomy one her spirit would have replied,—

O passing stranger, call this not
A place of fear and gloom:
I love to linger o'er the spot—
It is my baby's tomb.

Here morning sunbeams brightly glow;
And here the moonbeam shines;
While all unconsciously below
My slumbering babe reclines.

His little waxen rosy face,
I know will soon decay;
And every charm and every grace
Will moulder fast away.

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But when the sun and moon shall fade,
My baby shall arise,
In brighter beams than theirs array'd,
And reign above the skies.

With a Christian friend I visited the neighbouring villages, and rambled both in frequented and unfrequented pathways.

The holly walk, though goodly trees are yet growing there, is not the holly walk of days gone by. The high hedge has disappeared, mansion after mansion has sprung up in the neighbourhood, and trespassed on that retiredness and seclusion which constituted its principal charm.

In the wilderness, or a little beyond, we met a barefooted Irish labourer, who was wandering about for employment. In answer to some inquiries, he told us that he did as the priest told him to do, he prayed to God and to the Virgin Mary, who had given him luck the last time he came to England. Poor fellow! if he could have read the Holy Scriptures, he might have found the words of the Saviour, "Verily, verily, I say unto you, Whatsoever ye shall ask the Father in my name, he will give it you;" but he must have looked a long while before he could have found the same thing said of the Virgin Mary.

Long did we linger on the Newbold Comyn Hills; for not only are the natural beauties of the place seductively enchanting, but the villages around, the turrets of Warwick Castle, and the imposing tower of St. Mary's Church, are strikingly interesting.

We threaded the serpentine mazes of Lover's Walk, while gaiety and gravity were alternately allowed to take the lead. There is a great delight in colloquial discourse, when we feel that we can give way to the liveliest sallies of a buoyant spirit without the risk of being misunderstood. There is no freedom in conversation, where we must weigh our words in a balance before we utter them. An agreement on the deep and solemn realities of Divine things; an unfeigned reverence for God's holy word and will, and an unreserved conviction that Jesus Christ is "able to save them to the uttermost that come unto God by him," imparts a mutual confidence, leaving almost without restraint the unpremeditated impulses of the heart.

Lillington, like most of the adjacent villages, is rendered interesting by the stillness and seclusion of the neighbourhood around, the same scenery of homesteads and fields, and oaks and elms, is to be met with in all directions, imparting quietude and tranquillity to the mind.

We wended our way in the direction of Offchurch, and while seated on a stile, a decent looking, neatly dressed cottager's wife came up. In helping her with her loaded basket over the stile, I was struck with the cleanliness and simplicity of her appearance. She was a perfect contrast to the dirty drabs that so frequently meet the eye in a crowded city.

The brook was bubbling its way over the stones, and through the sedgy grass, and the young purpled dragon-flies were on the wing. It is related, I think, of Lord Byron, that being fond of sailing paper boats across a pond, he, on one occasion, through want of other materials, formed his little bark of a fifty-pound note. Being better provided as boat-builders than his lordship, we had no necessity to resort to so expensive an experiment as the one I have recounted.

We took the road to the park, and had scarcely entered it under the guidance of two female cottagers, returning home with their marketings, when a long-winged heron sailed by at a little distance. It reminded me that I once sat down to a country breakfast where a hot roasted heron was placed upon the table.

My companion talked with the women, in the very spirit of Christian kindness, and gave them books for their children. One of them showed her thankfulness by offering to gather a nosegay of roses from her cottage garden.

It does us good to mingle with the poor,
For much is gathered from their plain remarks;
And oftentimes the knowledge of their griefs
Teaches us patiently to bear our own.

Offchurchbury is a mansion of great antiquity, and its Gothic grandeur is very imposing. Had Offchurch no other recommendation, the stately palace of the Mercian king Offa, that once stood there, has clothed the place with olden associations.

The reflecting visitor can hardly walk through the place of sepulchre attached to the church of St. Gregory, without drawing comparisons between the past and present, and musing on the solemnities of the future.

Whitnash, Tachbrook, Princethorpe, and Cubbington, are all places of more or less interest, on account of their retired situations, and the rural scenery around them. At Cubbington, the gift of a few little books to the cottage children, ga-

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thered a motley tribe of young people around us, of all the colours of the rainbow, so that we walked through the village to the church-yard with a numerous retinue at our heels. My companion spoke kindly to them, and questioned them, and having ascertained that there might be from one to two hundred children in the immediate neighbourhood, he promised a book to every one, which promise was faithfully performed in a subsequent visit.

The rosy-faced churchwarden who attended us in our visit to the church and the old manor-house where he lived, did not profess to be either a theologian or an antiquary, so that he did not impart to us much learned information; but his civil attentions, old English plainness, and hospitable disposition, fully made amends for this deficiency.

Stoneleigh Abbey is one of the Warwickshire lions; but the mansion was under repair, and we did not enter it. Knowing that the building was originally founded for a fraternity of Cistertian monks, I had pictured to myself a more ancient and complicated pile, so that the uniform monotonous front, with its manifold windows, plain door-way, and flight of a dozen steps, somewhat disappointed me. Very little of the original building now remains.

The motto over the high iron gate, at the entrance of the garden, "Tout vient de Dieu," "All comes from God," disposes the mind of the visitor to indulge in sober reflection. The head gardener, a Scotchman, seemed to regard with great complacency the fair flowers and goodly shrubs that he had watched and watered with so much care, and they certainly did great credit to his skill. The river rolls its deep waters considerably below the garden level, and the noble oaks in the park across the stream, spread a grateful and majestic solemnity around.

On returning from the Abbey, the gardener accompanied us some distance across the park, to show us the Stoneleigh oak, the noblest of the forest trees within our view. Its stem was about twenty-seven feet in girth, disproportionately large to the projecting branches above. It was, however, a noble tree.

Time was,

> "When settling on its leaf,
> A fly could shake it to its root;

And time has been

> "Tempests could not."

While gazing with admiration on the forest king, a party of workmen returning from their labour passed by, and began to tell us of a yet more wonderful oak, in another part of the park; but they were in their cups, so that we did not believe them. They carried their naked scythes carelessly across their shoulders, and as they reeled first on one side and then on another, it was impossible not to fear that an accident might ensue. If intemperate men would only reflect how frequently and how mercifully they are preserved from danger in seasons of reckless intemperance, it might lead them to greater circumspection.

Among so many sources of pleasure, these rural rambles were truly delightful. How grateful it was to look around from the uplands on the towers and spires of churches, the habitations of men, the homesteads of the hospitable rich, and the cottages of the industrious poor, the distant team, the lowing cattle, and the bleating flock. The varied heavens, the cheerful mid-day beam, the grateful shade of the wide spread trees, the healthful breeze, the corn in the fields, waving like the billows of the sea, and the shadow of the passing clouds gradually covering the valleys and running up the distant hills, all in their turn contributed to our enjoyment. And then the wild warbling of the feathery tribe, the insect world on the wing and on the grass; the diversified trees, shrubs, and flowers, and the tangled mass of vegetable beauty seen in the hedge rows, the ditches, and the secluded pools.—These, with a consciousness of added health and strength, a sensible increase of happiness, and an overflowing thankfulness of heart to the Father of mercies, for his boundless liberality and goodness, were some of the manifold gratifications of the Perambulator in his trip to Leamington.

SEQUOYAH, THE INVENTOR OF THE CHEROKEE ALPHABET.

SEQUOYAH, or, as he is commonly called, George Guess, is the son of a white man named Gest, and of a female who was of the mixed blood. The latter was perfectly untaught and illiterate, having been reared in the wigwam, in the laborious and servile habits of the Indian women. She soon became either a widow, or a neglected wife, for in the infancy of George we hear no-

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thing of the father, while the mother is known to have lived alone, managing her little property, and maintaining herself by her own exertions. That she was a woman of some capacity is evident from the undeviating affection for herself with which she inspired her son, and the influence she exercised over him; for the Indians have naturally but little respect for their female relations, and are early taught to despise the character and the occupations of women. Sequoyah seems to have had no relish for the rude sports of the Indian boys; for when quite young he would often stroll off alone into the woods, and employ himself in building little houses with sticks, evincing thus early an ingenuity which directed itself towards mechanical labours. At length, while yet a little boy, he went to work of his own accord, and built a milk-house for his mother. Her property consisted chiefly of horses and cattle, that roamed in the woods, and of which she owned a considerable number. To these he next turned his attention, and became expert in milking the cows, straining the milk, and putting it away with all the care and neatness of an experienced dairyman. He took care of the cattle and horses, and when he grew to a sufficient size, would break the colts to the saddle and harness. Their farm comprised only about eight acres of cleared ground, which he planted in corn, and cultivated with the hoe. In addition to her rustic employments, the active mother opened a small traffic with the hunters; and Sequoyah, now a hardy stripling, would accompany these rough men to the woods, to make selections of skins, and bring them home. While thus engaged, he became himself an expert hunter, and thus added, by his own exertions, to the slender income of his mother.

The tribe to which he belonged being in the habit of wearing silver ornaments, such as bracelets, arm-bands, and brooches, it occurred to the inventive mind of Sequoyah to endeavour to manufacture them; and without any instruction, he commenced the labours of a silversmith, and soon became an expert artisan. In his intercourse with white men, he had become aware that they possessed an art, by means of which a name could be impressed upon a hard substance, so as to be comprehended at a glance by any who were acquainted with the invention; and being desirous of identifying his own work, he requested Charles Hicks, afterwards a chief of the Cherokees, to write his name. Hicks, who was a half-blood, and had been taught to write, complied with his request, but spelled his name George Guess, in conformity with its usual pronunciation, and this has continued to be the mode of writing it. Guess now made a die, containing a *fac simile* of his name, as written by Hicks, with which he stamped the articles he fabricated.

He then turned his attention to drawing; taking sketches of houses, cattle, and other familiar objects, though he had probably, at that time, never seen a picture or engraving. He now became popular, and excited much attention among his tribe, who flocked from the surrounding settlements to see his works. This brought him into a snare. The only way that he knew of showing civility to his visitors was to offer them strong drink. At first his practice was to place the bottle before them, and leave them to enjoy it without his company. He was soon, however, persuaded to join in the merriment, and at length became a drunkard. But the effect of intemperance in his case was not to make him sullen or ferocious; for at such times, he would advise his comrades to forgive injuries, to live in peace, and to abstain from giving offence to the whites, or to each other. When his companions grew quarrelsome, he would sing songs to amuse them; and while thus employed, would often fall asleep.

Sequoyah suddenly gave up drinking, and took up the trade of a blacksmith, and having constructed a bellows, he made hoes, axes, and other implements of agriculture. Before he went to work in the year 1820, he paid a visit to a Cherokee village on the Tenessee river, during which a conversation took place on the art of writing, as possessed by the whites, and there a discussion ensued, whether it was a faculty of the mind, or gift of the Great Spirit, or a mere imposture. Guess at length remarked, that he believed it to be only an art, and that he could invent a plan by which the red men could do the same thing. He had heard of a man who had made marks on a rock, which other white men interpreted; and he thought he could also make marks which would be intelligible. He then took up a whetstone, and began to scratch figures on it with a pin, remarking that he could teach the Cherokees to talk on paper

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like white men. The company laughed heartily, and Guess remained silent the remainder of the evening. The subject was one upon which he had long reflected, and next morning he was again found scratching on the whetstone.

Full of this idea, he returned to his home at Willistown, on the southern waters of the Coosa river, procured paper, which he made into a book, and commenced making characters. His first supposition was, that letters represented certain words or ideas, and accordingly he tried to invent characters of this description; but after much labour he found this to be impracticable, and imagined the idea of an alphabet, in which he was probably aided by an old spelling book that had fallen into his hands. He persevered until he had invented eighty-six characters, and then considered his work complete. While this was going on, he was apprised that he was becoming a laughing-stock to his people, who began to consider him a fool; but he replied, that what he was doing would make fools of none beside himself, and continued his labour.

Having completed his alphabet, he taught it to his little daughter Ahyokah, then about six years of age. After this, he made a visit to Colonel Lowry, a Cherokee, three miles distant, who had often ridiculed his supposed delusion. "Well," said Lowry, "I suppose you have been engaged in making marks." "Yes," replied Guess, "when a talk is made, and put down, it is good to look at it afterwards." Lowry suggested that Guess might have deceived himself, and that having a good memory he merely recollected what he had intended to write; but he insisted that it was a real art, and the next day Lowry heard Guess's child repeat the alphabet with the Cherokee sounds.

Guess completed his work in 1822. The missionaries established among the Cherokees adopted his invention, and printed books for their use. A few of the characters are taken from the English alphabet, but with no resemblance to the sounds, as for instance, d stands for the sound of *a*, j for *gu*, k for *tso*, &c. Guess taught many to read and write, and in 1822 visited Arkansas, where he taught those of his tribe who had emigrated to that country. Shortly after, and before his return home, a correspondence was opened between the Cherokees of the west and those of the east of the Mississippi, in the Cherokee language. In 1823 he removed beyond the Mississippi, and in the same year, the general council of the nation awarded to him a silver medal, as a token of honour for his services. He visited Washington in 1828, as a member of a delegation to the President, when a portrait of him was taken. He is represented holding a tablet, on which the Cherokee alphabet is delineated.—*American Sunday School Journal.*

THE LIBERTINE DESCRIBED.

WHAT shall we say of libertines? It is liberty with them for a man to speak what he thinks; to take what he likes; to do what he lists, without restriction, and without control. Call ye this freedom, that a man must speak and live by rule; to have a guard upon his lips and his eyes; no passage for a vain word or look, much less for a lewd one; to have his best pleasures stinted, his worst abandoned; to be tasked with an unpleasing good, and chid when he fails? Tush! tell me not of it, says the libertine. To let the heart loose to an unlimited jollity, to revel heartily, to feast without fear, to drink without measure, to swear without check, to admit of no bound of luxury but our own strength, to shut out all thoughts of scrupulous austerity, to entertain no guest of inward motion, but what may soothe our lawlessness—this, with them, is liberty, and who goes less is a slave to his own severe thoughts! "Get thee behind me, Satan; for thou savourest not the things of God." If this be freedom, to have our full scope of wickedness, oh happy devils! Oh miserable saints of God! Learn, O vain men, that there is nothing but impotence, nothing but chains and manacles, in the freest sins. Some captive may have a longer chain than his fellows; yea, some offender may have the liberty of the tower, yet he is a prisoner still. Some jail may be wider than some palace: what of that? If hell were more spacious than the seat of the blessed, this doth not make it no place of torment. Go whither thou wilt, thou resolved sinner, thou carriest thy chain with thee; it shall stick as close to thee as thy soul; neither can it ever be shaken off, till thou have put off thyself by a spiritual regeneration: then only art thou free.—*Bishop Hall.*

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A WORD TO SINNERS.

WICKED men are treasuring up wrath, and hoarding up destruction against their own souls. Every new oath or blasphemy heaps a new mountain upon their conscience; every renewed act of any uncleanness plungeth a man deeper into hell, giveth the devil more holdfast of him, adds more fuel unto his Tophet, squeezeth in more dregs and woful ingredients into the cup of astonishment which he must swallow. Doubtless, a sinner in hell would account himself a blessed creature if he did not feel there the weight and worm of such and such particular sins, which, with much easiness, he might have forborne, nay, which without pain and labour, he could not commit. We see Dives in hell begged for but a drop of water to cool his tongue in that mighty flame. Now, suppose a man in a burning furnace; what great comfort could he receive from but a drop of water against a furnace of fire? Certainly the abatement of so much pain as the abiding of one drop would remove, could in no proportion amount to the taking away the punishment of the smallest sin, of the least idle word, or unprofitable thought; and yet in that extremity there shall not be allowed a drop of refreshment against a lake of fire. Oh that men would therefore in time consider what a woful thing it is to fall into the hands, and to rouse up the jealousy of the living God; that because he will do thus and thus unto obdurate sinners, they would, therefore, in time humble themselves under his mighty hand, and prepare to meet him in the way of his judgments. For certainly no sooner does the heart of a sinner yield to God, but he meeteth him in his return, and goeth before him with goodness; his heart likewise is turned within him, and his repentings are kindled together. With much more delight will he put a man into the arms of Christ, than force him under his feet. He doth not afflict willingly, nor grieve the children of men; he taketh no pleasure in the death of a sinner, but he delighteth in mercy.—*Reynolds.*

IN WHAT DOES THE MERITS OF CHRIST'S SUFFERINGS CONSIST?

NOTWITHSTANDING the evidence there is, that Christ died in the room and stead of sinners, and that the crimes of men are expiated by his sufferings, it is to be remembered that there is no merit, no moral worth, or atoning virtue, merely in sufferings. Pain and distress have no moral virtue in them; and are of no importance, otherwise than as *means* through which the beauty or glory of the Divine character, and the true disposition of the Divine mind, may be seen by his creatures. For, as all Divine administration is fitted to exhibit the character of God, if punishments did not answer this end, they would never be made use of in the Divine government. The righteousness of the law is fulfilled in the sufferings of the sinner, in no other way than as they serve to exhibit the righteous character of God, and prove him to be a hater of iniquity. Were not this the case, the moral character of the Man Christ Jesus would not have been of so great importance to his being made an offering for sin. But his whole worth as a *sacrifice* must be estimated by his capacity to endure pain. Now the worth of the sacrifice which Christ made of himself for the sins of the world arises from the moral excellences of his person and character. Were not this the case, the same quantity of sufferings endured by a person of inferior character would have equally answered the end of obtaining pardon for the sinner. It is true, no doubt, that for a person of Christ's dignity and worth to endure greater degrees of pain, is of more importance than enduring less. Yet the value, the import, in a moral view, of his sufferings, be they either greater or less, arises from his personal worth and character.—*Dr. S. West's Scripture Doctrine of Atonement.*

TRUTH.

WHEN we study the writings of men, it is well if, after much pains and labour, we find some particles of truth amongst a great deal of error. When we read the Scriptures, all we meet with is truth. In the former case we are like the Africans on the Gold Coast, of whom it is said that they dig pits nigh the waterfalls of mountains abounding in gold; then with incredible pains and industry, wash off the sand till they espy at the bottom two or three shining grains of the metal, which only just pay their labour. In the latter case, we work in a mine sufficient to enrich ourselves and all about us.—*Bishop Horne.*

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Joan of Kent and her Son.

ENGLISH HISTORY.

EDWARD III.

(Concluded from page 22.)

The reign of Edward III. was one of continual warfare. At this time he was restrained by a truce from direct hostilities with the French, but several petty acts of hostility took place. When we consider that at this period acts of violence were represented as the most glorious of all occupations, we need not be surprised to find the nobility engaged in acts of plunder, and their monarch equally anxious for every opportunity of warfare. The Spanish fleet having committed some depredations, Edward sent out a fleet against them, which was victorious.

In 1354, the truce ended, and Edward marched from Calais with an army, and advanced into the French territories, which he laid waste; but he was restrained, by the want of supplies, and was soon recalled to England by an invasion from Scotland. This he soon repelled, and marching northwards, he burned Edinburgh, and ravaged the open country; but he could retain no more of the country than his army occupied, and when he returned to England, he, in effect, abandoned his conquests.

In 1356, similar scenes took place in the south of France. The prince of Wales advanced from Guienne, and related, in an account of his expedition, that in two months he had taken 500 villages, besides cities and walled towns, and that he had devastated the country by fire and sword, thus causing incalculable suffering. Having advanced as far as Berri, he considered it desirable to retrace his steps; but the king of France, with a large army, hastened to intercept his retreat, and the English found cause to regret the ravages they had committed, which left them destitute. The English army did not exceed 8000 men; the French had more than 40,000; but the Black Prince occupied a strong position among vineyards and enclosures, only to be approached by narrow roads between hedges. The next day was Sunday. The French had now surrounded the English encampment, and passed the day in joyful anticipations of victory. The English strengthened their position, though they suffered much from want of supplies. The cardinal of Perigord in vain endeavoured to negotiate a truce. Edward was willing to surrender his prisoners and booty, and not to renew the war with France for seven years, upon condition of being allowed to retreat unmolested; but king John insisted that the prince should surrender himself and

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a hundred of his knights as prisoners, intending to require the surrender of Calais as their ransom.

The next morning the battle began. The French knights and men at arms pressed forward through the narrow lanes, but many were slain, and others dismounted by the archers. The mass being thus thrown into confusion, they lost the advantage of numbers; and, after a severe conflict, the English were conquerors. King John was taken prisoner in a struggle, in which he had nearly fallen a victim to the eagerness of the assailants. Prince Edward was surprised at his victory, and exhibited all that courtesy which was considered the proof of a true knight. He treated the captive monarch with kindness, and exhibited every attention towards him, even waiting upon him while at supper.

The English army was released from its dangerous position, but could not take any other advantage of the victory thus gained. The Black Prince retreated to Bourdeaux, and after passing the winter there, proceeded to England, where he had a triumphal entry into London. The spirit of chivalry here showed itself very different from heathenism; the captive monarch was not dragged at the chariot wheels of his conqueror, and then put to death. The French king, John, richly dressed, rode through the city of London, seated upon a noble white horse decked with trappings, while the Prince of Wales accompanied him on a small black nag. The French king was lodged in the Savoy palace, and, although a prisoner, was treated with all the attentions dictated by chivalry. It is pleasant to record proofs of the abatement of ferocity in war, but still we must mark the defects of the system which then prevailed, and the wrong estimate of historians even at the present day. The laws of chivalry showed undue respect of persons. Thousands and tens of thousands of unoffending villagers suffered from needless and cruel invasion; for this the Black Prince is not censured, while he is commended to posterity for his treatment to the royal prisoner, which, after all, was little more than "the pride that apes humility." But the balances of human wisdom do not fairly estimate men and their actions.

The battle of Poietiers did not decide the contest between England and France. The resources of the former were so much exhausted, that a truce for two years was a desirable measure. This left France a prey to civil dissension in the absence of her monarch. Bands of soldiers, acknowledging no general, ravaged the country; and the peasants reduced to despair by suffering, or maddened by the oppression of their feudal superiors, rose in considerable numbers, destroyed many castles, and put the nobles and their families to death with the most atrocious circumstances of ferocious cruelty. These peasants were called "the Jacquerie;" they were soon suppressed by the knights and military forces of the contending powers, who rode down the peasantry, whether guilty or innocent of these outrages, trampling them under foot as the dust of the earth, thus slaughtering them without hesitation or remorse, while their wrongs remained unredressed.

In 1359, Edward again ravaged France, and found that it was impossible to conquer the kingdom; but the state of that country was wretched beyond description. The desolation made by the English troops effectually prevented their continuance for any length of time in one position. The terrific effects of a violent storm also induced Edward to vow that he would grant peace to France. He consented to terms of pacification, by which Guienne and other provinces were ceded to England, and a large ransom was agreed to be paid for the liberation of king John.

In 1362, the Prince of Wales was invested with the English dominions in France, and styled Prince of Aquitaine. He had lately married Joan of Kent, celebrated for her beauty and accomplishments.

France was reduced to a miserable state. King John being unable to raise the sum promised for his ransom, voluntarily returned to England, leaving his son as regent. He had an incentive to this honourable action in the conduct of some of the nobles, who, though hostages for his ransom, had broken their faith and escaped. He was received in London with festivities, and treated with respect and attention; but he died there not long after.

At this period, France suffered most from the ravages of the independent bodies of soldiery who styled themselves "Free Companions" and "White Companies." Efforts were made to induce them to undertake a crusade, but in vain. In 1366, Du Guesclin, a celebrated French knight, succeeded in di-

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resting the efforts of these troops against Peter the Cruel, king of Castile, who, after murdering his brothers and many of his nobles, caused his queen, the sister of the queen of France, to be put to death. Du Guesclin was a bold and enterprising character, and induced these men to follow him. Passing by Avignon, they demanded from the pope a large sum of money and his blessing. No difficulty was made as to the latter, though considerable reluctance was evinced respecting the money; but the character of these warriors was too fully known for the pope to venture to refuse their demands. Du Guesclin and his band soon triumphed. Peter was driven from his throne, and Henry of Tristemarre, reputed his natural brother, was placed there in his stead. Peter applied to the Black Prince for support, and several circumstances pleaded strongly in his favour. He was a profound dissembler, and told his story so as to excite sympathy in the mind of the prince, whose chivalrous temper naturally led him to take up the cause of the deposed monarch, while the opposition between France and England rendered him jealous of the fame and success of Du Guesclin. He at once promised to restore Peter to the throne of Castile. The princess expressed deep regret that her husband should take up the cause of one so deeply criminal; but this only excited the prince to pursue his design more eagerly. It was a fatal resolve, dictated by personal vanity. In 1367, he entered Spain, at the head of a considerable army, having first recalled the English from the "White Companies." The prince was soon distressed for supplies. Du Guesclin's first plan was to weaken the enemy by cutting off foragers, and causing the army to waste by famine; but the defiance of prince Edward induced him to give battle at Navarette; he was conquered, and Peter was replaced on the throne.

We read in Scripture, "He that justifieth the wicked, and he that condemneth the just, even they both are an abomination to the Lord." Doubtless the conduct both of Peter and Edward was displeasing to the Most High, who often causes evil doers to punish each other. Peter delayed to reimburse the expenses the Black Prince had incurred in his cause, and detained the English army in an unwholesome district, till their numbers were diminished by famine, and the prince had contracted a fatal disorder. At length he retired from Spain, and left Peter unprotected. Du Guesclin soon availed himself of this alteration, and invaded Castile with success. Peter was taken prisoner, and soon after stabbed by his brother Henry.

Meanwhile the Black Prince laid heavy taxes on his subjects in Guienne, to liquidate his debts. A hearth-tax, in particular, caused much discontent, and the Gascons applied to the king of France. He willingly availed himself of the pretext, and summoned Edward to give an account of his proceedings, claiming the feudal superiority he had previously relinquished. Hostilities were commenced, but the declining health of the Black Prince prevented him from heading his troops. He was, however, carried in a litter to Limoges, where he caused the city to be stormed, and massacred the garrison with 3000 of the helpless inhabitants, including women and children, many of whom supplicated him for mercy on their knees, while with inconsistency he spared the three commanders of the French garrison who had compelled the townsmen to resist him. Here is a striking proof that the brightest examples of chivalry were devoid of Christian feeling. The prince was obliged to return to England on account of his declining health. Large sums were raised by the English parliament, and repeated expeditions were sent forth; but after ravaging the country, all that remained to the English was the reputation of having performed a number of gallant actions. Froissart imputes much of the unpopularity of the English to the arrogance of the Black Prince and his knights, and the contempt with which they treated the natives of the provinces they sought to retain. The French troops soon regained all the territory lately possessed by England in France, excepting Calais and a few other towns. Thus the boasted victories of Cressy and Poitiers left only barren laurels to the conquerors, even during their lives; and one of the last public acts of Edward III. was to procure money from his subjects to enable him to resist a threatened invasion of England by the French! The lives of thousands, and tens of thousands, with vast sums of money, had been expended in vain, a deep amount of guilt was incurred, and no earthly advantages were gained in

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return; but national animosities were excited, and the rivalry thus stirred up has continued even to the present day. Happy will it be for both nations when this evil spirit is wholly laid aside and forgotten. National glory, as it is falsely called, might well be relinquished for so desirable a change.

The unsatisfactory result of these expensive preparations excited the displeasure of the parliament; and as they attributed much of this to the practice of employing the prelates and dignified ecclesiastics in the offices of state, some of these personages were dismissed.

In 1376, the Black Prince died at an age comparatively early. He was honoured with a pompous funeral, and left large bequests to abbeys and monasteries, in return for the false peace into which his soul had been lulled by the Romish priesthood. King Edward was now almost in a state of dotage, and the parliament, complaining of the misgoverned condition of the land, prayed that the royal council might be enlarged, and no measures of importance undertaken without its concurrence. Queen Philippa had died in 1369, and the declining monarch was infatuated by a mistress, Alice Piers, who presumed even to seat herself with the judges, and to direct the administration of justice. In the year 1374, Edward placed her by his side in a chariot, calling her the Lady of the Sun, and rode from the Tower to Smithfield, attended by a train of nobles and knights, each of whom was led by a richly dressed damsel. Jousts, the mock-fights of chivalry, were held for seven successive days in honour of this wretched minion. Her follies attracted such public notice that she was compelled to retire from court; but the enfeebled king recalled her, and she attended him in his last illness. Her conduct is thus described:—"She permitted him to have no religious attentions, choosing to assert that his health would be re-established. When his last moments approached, and she observed his voice to fail, his eyes to become glazed, and his limbs chilled, she pulled the rings from his fingers, and went away. A priest found him still sensible, but speechless; but he kissed the cross, and wept, before he expired." We have reason to fear that he had no true faith in Him who died on the cross. But it is to be feared that to Edward III. the awful words of Holy Writ are but too applicable: "Thou shalt be brought down to hell, to the sides of the pit. They that see thee shall narrowly look upon thee, and consider the saying, Is this the man that made the earth to tremble, that did shake kingdoms, that made the world as a wilderness, and destroyed the cities thereof?" Yet this was a monarch of whom his rival could say that he had reigned most nobly and valiantly, and that his name ought to be remembered with honour among heroes; he was offered the empire of Germany, and of him English historians are accustomed loudly to boast!

The military spirit of Edward III. impoverished his country both by withdrawing the services of the ablest part of its population, and by the direct taxation required to support his troops. War was esteemed the noblest profession, and the soldier, whose only employment was to destroy, was paid at a rate double that of the labourer and cultivator of the soil, who benefited others, as well as supported himself and his family. But his need for money compelled Edward to increase the privileges which the middle classes had already begun to enjoy. They had now considerable weight in the legislature, for the representatives of the commons were allowed to form a distinct legislative body; and their speaker not only presided in their deliberations, but pleaded for their rights and privileges, and remonstrated against official misconduct. But the most important improvement in this reign was occasioned by the notice taken of the abuses of the church of Rome; this stimulated to various measures of reformation, and gave clearer views of the necessity of instructing the people. Here the corrupted state of the language was found a great hinderance, the natives of different counties being scarcely able to understand each other. This led to an important change. At the Norman conquest the French language had been introduced into all law proceedings. Thus the most important matters of business were conducted in a tongue of which the mass of the people were ignorant; and the middle and upper ranks were more in the habit of cultivating that language than their own. But in 1362 a law was passed directing the use of the English tongue in all the courts of law. The careful administration of justice was one

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of the most favourable circumstances of this reign. Judge Hale, no common authority, speaks decidedly in its commendation. He says, "The pleadings of this reign have neither uncertainty, prolixity, nor obscurity." The language of the country was now cultivated by those who had formerly neglected it, and authors were encouraged to use it in their writings. Those who really desired the spiritual welfare of the people, dispersed vast numbers of small written treatises and translations of Scripture in English; and not only the middle, but the lower orders, began to take an interest in their religious and civil liberties; though as yet this work proceeded slowly. The seed was largely sown in the fourteenth century, but more than 100 years passed away before much of the fruit was to be seen. This was the most glorious feature of Edward's reign. The false glare proceeding from victory and slaughter had disappeared even before his death. The progress made in the arts was evidenced by many noble edifices constructed in this reign, but these have mostly crumbled into dust. The privileges gained by the community, but still more the resistance to the papal authority, and the inclinations to repress the undue assumptions of the ecclesiastics, have alone left traces of benefits arising during the reign of Edward III. In his days Englishmen first began "to search the Scriptures" in their native tongue. Ball and others boldly rebuked the vices and usurpations of the popedom; and when forbidden to preach in churches, they spoke openly to multitudes in the markets and on the highways until silenced by imprisonment. But Wickliff, though at first only excited to resist the Romish tyranny, soon had clearer views of the soul-destroying effects of popery, especially in the conduct of the monastic orders. The archbishop of Armagh, and others, had similar views, but Wickliff pursued the work with greater ability, and made it his main object to "declare the evil deeds of the monks and friars." As an effectual measure to promote this work, he translated the Scriptures into English. But the history of this reformer belongs more properly to the following reign.

Thus, although the reign of Edward III. is often spoken of as the most glorious in the British annals, when viewed clearly, and tried by Christian principles, the false glare of successful warfare disappears, and the reader may perceive that "the Lord of hosts hath purposed it to stain the pride of all (such) glory."

REVELATION AND THE LANGUAGE IN WHICH IT IS GIVEN.

1. *Revelation and Inspiration.*

To reveal is to make known something which was before unknown; and Divine revelation is the direct communication of truth, before unknown, from God to men. Difficulty has frequently arisen on this subject from confounding revelation with inspiration. As J. D. Michaelis remarks, Compend. Theol. p. 29, "The words *inspiration* and *revelation* are to be distinguished from each other; for the former, *inspiration*, has a more general meaning, while the latter, *revelation*, refers to those things only of which the sacred writers were ignorant before they were divinely taught. Those who confound these words, are accustomed to invent empty objections; as, how it is possible that things very well known to the sacred historians by ordinary means, should be revealed to them, which they pronounce to be absurd, as it really is; but yet the writers of the Bible might be moved by Divine impulse to commit to writing matters with which they were before well acquainted, and these things might be so brought to their minds by the Holy Spirit, that there would be no danger of erring."

This distinction is in exact accordance with the declaration of our Saviour to his disciples, John xiv. 26, xvi. 12, 13, where the twofold office of the Holy Spirit, of bringing to remembrance things before known by other means, and of revealing new truths, is clearly recognised. The word *inspiration*, by the custom of speech, includes both these operations of the Spirit; the word *revelation* only the latter. Accordingly, revelation may be defined as that act of the Holy Spirit, by which truths before unknown are communicated to men; and inspiration, the act of the Spirit, by which not only unknown truths are communicated, but by which also men are excited to publish truths for the instruction of others, and are guarded from all error in doing it. Thus it was revealed to the ancient prophets that the Messiah should appear, and they were inspired to publish this fact for the benefit of others.

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The affecting scenes at the cross of Christ were not revealed to the apostle John, for he saw them with his own eyes, John xix. 35; but he was inspired to write a history of this event, and by supernatural guidance was kept from all error in his record. It is, therefore, true, as the apostle Paul affirms, 2 Tim. iii. 16, that all Scripture is given by inspiration of God; though every part of the Bible is not the result of immediate revelation. Let this distinction be carefully kept in view, and many objections which are often urged with great confidence against the inspiration of certain parts of the Bible, and many difficulties which honest minds sometimes feel, vanish at once.

For convenience' sake we call the whole Bible a revelation, because most of the truths which it contains were made known by direct communication from God, and could have been discovered in no other way; and, generally, it is only the incidental circumstances attending the communication of these truths, that could be ascertained by the writers in the ordinary modes of obtaining information.

Inspiration, therefore, does not exclude diligent and faithful research on the part of the sacred writers, Luke i. 1—4; nor one sacred writer quoting from another, as Micah iv. from Isaiah ii.; nor a sacred writer making use of documents furnished by uninspired men, for the ascertaining of facts, as the Book of Jasher, and the Book of Jehovah's Wars, Josh. x. 13; Num. xxi. 14; nor the characteristic peculiarities of style and manner, resulting from diversity of intellectual character, education, and other circumstances, such as we observe when we compare Isaiah with Ezekiel, or John with Paul.

2. *Perfectness of Revelation.*

Having thus settled the notion of revelation, we next inquire, What is essential to the perfectness of a revelation? On this point difficulties often arise from the merely accidental association of ideas; many seeming to imagine, that because the revelation itself is alleged to be perfect, therefore there should be no incidental circumstance of imperfection attending its publication among men. But let us learn to distinguish the things that differ. What is a perfect revelation but perfect truth clearly communicated? In oral revelation, the person chosen as the organ of communication may be young or old, elegant or rustic, his features may be beautiful or plain, his voice melodious or harsh, his manner easy or awkward, his language ornamented or simple, and the perfectness of the revelation not be in the least affected by any of these circumstances. In written revelation, then, is the form of the book at all essential to the perfectness of the revelation? or the binding? or the materials of which the book is made? Must ink become unfading, and paper imperishable, when used for the recording of a revelation, or the revelation itself become imperfect? Must writers, or copiers, or printers, become exempt from human frailty, as soon as they are employed about a book containing revelations? Must the manner and style of revelation be adapted to any particular set of circumstances, or conformed to any one standard of taste? In a book designed for universal use this would obviously be improper and absurd. The Chinese, the Esquimaux, the South-sea Islanders, have as much right to claim that the Bible should be throughout conformed to their peculiar circumstances and tastes, as the Germans, the French, or the English. Revelation must naturally bear the prevailing impress of the circumstances and tastes of the times and nations in which it was originally given. The Bible, however, though it bears the distinct impress of Asiatic manners, as it should do, being originally an Asiatic book, is most remarkable for rising above local and temporary peculiarities, and seizing on the great principles common to human nature under all circumstances.

In order to make a revelation perfect, must its language be any other than human language? And, if human language, is it not necessarily, in itself, imperfect language?

The only question of any importance on this point is, Can the meaning of revelation be accurately ascertained? We answer, that the meaning of the Bible can, by the use of appropriate means, be ascertained with unfailing accuracy for all practical purposes; and these are the only purposes for which the Bible was given.

3. *Language of Revelation.*

The language of the Bible is the language of men, otherwise it would be of no use to men; and it is to be understood just as all other human language is under-

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stood. It is addressed to the common sense of men, and common sense is to be consulted in its interpretation.

This is necessary, because

1. No human language has a distinct sound for every distinct idea; and the same word must have several meanings. In English, for example, the word *letters* has several different meanings; and which one is intended is always made plain to common sense by the connexion in which it stands, and the nature of the subject to which it is applied.

"The girl is learning her *letters*."

"The merchant is writing his *letters*."

"Dr. Johnson was a man of *letters*."

Who that has common sense ever thinks of confounding the different meanings of the word *letters* in these three sentences? The same use of words occurs in the Bible, and the meaning is to be ascertained in the same way.

Again, common sense is to be consulted in the interpretation of the Bible, because

2. Language is sometimes literal, and sometimes figurative; and the connexion and the nature of the subject must always determine which sense, the literal or the figurative, is intended.

"The bird *flies* into its nest."

"The man *flies* into a passion."

Is there any difficulty in determining which sense of the word *flies* is intended in each of the above sentences? So when we say of a mass of lead, that it has great weight, the nature of the subject shows that we use the phrase literally, and mean that the mass is very heavy; but when we say of the opinion of a judge, that it had great weight in deciding a legal question, the nature of the subject shows that we use the phrase figuratively, and mean that his opinion had great influence.

There is just the same sort of figurative language in the Bible, and it is to be understood by just the same means.

Figurative language is always, not only more vivid and beautiful, but plainer and more permanent than literal; for the objects of nature, from which figures are drawn, remain always the same, while the meaning of words is perpetually changing. When the patriarch Jacob called his son Judah "a lion's whelp," Gen. xlix. 9, he expressed a distinctive feature of his character in terms which could not then be mistaken, and the meaning of which no subsequent changes of language could obscure. Ideas, particularly, pertaining to intellectual and moral subjects, can seldom be expressed literally so as to be understood by the mass of mankind. The language of common life abounds with figures; and the more illiterate and simple men are, the more frequent and free is their use of figurative language. This has always been remarked in respect to savage nations, and it is equally true of the illiterate classes among civilized people.

Several causes combine to make the Bible particularly rich in figurative language. It is designed for common use, and treats principally of moral and religious subjects, which can be made plain to the common understanding only by figurative expressions; it was written in the primitive ages and among a simple people; and it is adapted to the Asiatic mind: and by reason of its highly figurative style, which is sometimes urged against it as a defect, it commends itself the more readily to the common sense of men, and is the less affected by the changes which take place in manners and language.

4. *Perverse Interpretation.*

But though figurative language is easily understood, it is also easily perverted; and most of the perverse interpretations of the Bible arise from the abuse of its figurative language, or of its terms, the meaning of which is ambiguous, till determined by the connexion in which they stand. The difficulties of interpreting the Bible, and the differences of opinion in regard to its meaning, do not owe their origin to any intrinsic obscurity, but to habits of perverse interpretation, which unhappily have so long prevailed. The Bible is treated sometimes as if fancy and not reason were the proper organ to elicit its meaning; and at other times, because it is appealed to as authority, and the interpreter is not willing to yield a favourite opinion of his own, he adopts wrong principles of interpretation, and talks about allegory, or the analogy of faith, in order to force the sentiments of the Scriptures to a conformity with his own opinions. Every book, interpreted in this manner, must give rise to various and contradictory opinions. While the Greeks interpreted Homer allegorically, there was as much controversy about his meaning, as there is now about the meaning of the Bible; but as soon as men became willing to let Homer speak

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for himself, and to take him as he meant, controversy ceased. As soon as men adopt the same course in regard to the Bible, the same result will follow, and not before.

I will endeavour to illustrate my meaning by a few examples. Our Saviour says, "I am the true Vine." Who ever thinks of understanding this literally? He also says, "I am the Door." Who ever thinks of understanding this literally? And why are not these expressions to be understood literally? Because common sense teaches us that, literally taken, they are utterly unintelligible; but, figuratively understood, they give the just meaning appropriate to the speaker's purpose. And does not common sense teach the same thing in regard to another declaration of the same speaker, respecting the sacramental bread, namely, "This is my body?" How can this be literally understood without contradicting the evidence of all the senses? Might not the Western Indian, who worships a high rock, with equal propriety quote in defence of his idolatrous practice, such passages as these? "Ascribe ye greatness unto our God. He is the Rock," Deut. xxxii. 3, 4; "Of the Rock that begat thee, thou art unmindful," ver. 18; "Unto thee will I cry, O Jehovah, my Rock," Psalm xxviii. 1.

5. *Revelation to be interpreted by the common laws of language.*

By interpreting the Bible on the same principles by which we instinctively interpret the language of common life, its true meaning may be easily ascertained, and contrarieties of exposition avoided.

If the Bible is not to be interpreted by the common laws of language, then specific rules must be given for its interpretation, either by the Bible itself, or by some other Divine authority. But these rules, if understood at all, must be understood by the common laws of language; and how can it be any more difficult to understand revelation itself by the common laws of language, than it is to understand by this means the rules by which revelation is to be interpreted? Every where in the works of nature, we see the greatest results accomplished by the fewest possible instrumentalities; and in a revelation from the God of nature, we are not prepared to expect a needless complexity of means. The Bible gives no such specific, peculiar rules for its own interpretation, and all analogy is against the supposition of any such thing.

Again, if there be an authorized interpreter of the Bible, his interpretations must be understood by the common laws of language; and why can we not understand revelation itself by the common laws of language, as well as the interpretation of a revelation? What is the use of a revelation that cannot be understood without an authorized interpreter? And what is the use of an authorized interpreter to a revelation that can be understood without one? One or the other is certainly needless; and so needless an expenditure of means does not resemble the simplicity of the Divine economy in other things. The Bible gives no hint of any such power of authoritative interpretation; and reason rejects the whole theory as entirely groundless.

6. *Revelation designed to exercise the moral and intellectual powers.*

All theories of allegorical and infallible interpretation are, for the most part, either the mere sport of fancy, or an expedient for getting rid of the plain meaning of Scripture, and of the responsibilities which belong to men as free, intelligent agents. The Bible was never intended to relieve men from the responsibilities of thinking, searching, and judging—the labour of intellectual and moral action; but, on the contrary, to increase these responsibilities, and call forth this action. It was never designed to pamper the soul in idleness, and raise it to heaven, as lifeless matter is raised by a cord; but it was intended to rouse up all the energies of the soul, to promote its most healthful growth, and cause it to fly upwards to heaven. Accordingly, wherever the Bible is the people's book, there is found an inquisitive, active, enterprising, and intelligent population; and wherever the Bible is withheld from the people, there is a corrupted mass of sluggish mind.

God did not lay out the physical world with railroads and canals in all convenient directions, and cause habitations ready furnished to spring out from the ground, like the trees of the forest, and to every habitation provide a garden well supplied with all that might be necessary for the sustenance of a family. Without a necessity for the labours of agriculture, architecture, and the arts of life, the powers of man would never be developed. Why is not man as well provided

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for in infancy as the brutes? In those fruitful climes where there is any approach to this condition, man, for want of exercise and effort, becomes almost a brute. The physical world is so arranged as to give the highest and most vigorous exercise to the intellectual and physical energies of man; and every part of this exercise is essential to his intellectual and physical development. So the Bible is adapted to give the highest exercise to the intellectual and moral powers of man; and were this exercise to be superseded, his intellectual and moral powers would never be developed, the Bible would cease to be a blessing, and man would sink to the brute. There is no good to be obtained by man without labour; and least of all is spiritual good to be indolently obtained.

7. *Results from the preceding remarks.*

The preceding remarks are intended to establish the two following principles, namely:

1. The language of the Bible is human language, and is to be understood by the same means, and according to the same laws, by which all other human language is understood.

2. The Bible has no need of a succession of authorized interpreters, and admits of no such thing; but addresses itself directly to the practical reason and common sense of all mankind.—*C. E. Stowe.*

ROSE AND CROWN LANE;

OR,

A SKETCH OF MY NEIGHBOURHOOD.—No. I.

Near the extremity of our town, is a row of small modern-built cottages; each house consists only of one room on the ground-floor, with a small wash-house behind; one room above, styled, according to the taste of the inhabitant, a drawing-room or a bed-chamber, and an attic over it. A strip of ground, the width of the house, and about three times its length, serves as a drying ground and garden. This row takes the name of Rose and Crown Lane from the public-house at the corner displaying that sign; to which, indeed, the ground formerly belonged, as a stable-yard and orchard, the house having been formerly much frequented by the humbler sorts of farmers and their wives, who left their horses there while they attended the market. Of late years, the custom in this house has much fallen off, as there are very few of that class who now visit the market, and the topping farmers frequent a genteel house, more in the heart of the town. Finding but little use for his stable, and in hope of making up the deficiency arising from the change of affairs, the landlord converted his orchard and stable-yard into the aforesaid row of tenements. The row consists of ten houses; of the inhabitants of each I shall give a short description, excepting only No. 3, which is occupied by myself, of whom I am not bound to say any thing; farther particulars, if required, may be obtained of any of the neighbours; those who have lived longest in the row will know most about me, I having been one of the first tenants. I am not much in the habit of needlessly prying into my neighbours' affairs, but there are certain out-of-door symptoms, and statements of those who know the parties, which can scarcely fail to give an attentive observer some correct ideas of the character of the inhabitants; even the first puff of smoke, that issues from the chimney in a morning, is a pretty sure indication to the neighbourhood, whether industry or indolence lights the fire.

No. 1, is occupied by Mr. John Perkins, shoe-maker. To begin with morning observations. The bed-room curtains are seldom undrawn till nearly eight o'clock in the morning. The curtains were I believe originally white, but are now of a dirty ash colour, and hang in slips, occasioned by their being exposed to the heat of the sun. Mrs. Brown's, at No. 2, which were put up at the same time, look as white as ever, and nearly as sound; but then they are washed every spring, and drawn back every morning before six o'clock, when the sun has not got round to rot them; this may account for the difference; but to return to Mr. Perkins. Often after eight o'clock, a dirty little urchin issues forth to purchase a halfpenny fagot; if, perchance, he should loiter by the way, his mother appears at the door, in her night cap, and with her gown unpinned, to watch for his return; on his arrival, he is saluted with a cuff on the ear, which sets him roaring and sobbing. In a minute or two, the forgiving mother, having kindled her fire, calls to the young culprit, "Come, leave off crying, there's a good boy, and fetch me a kettle of water." With a little soothing, he is induced to

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comply, and is afterwards engaged to blow the fire and make the water boil. Meanwhile four or five more children come tumbling down stairs one by one, scarcely half awake, with dirty faces and hands, and ragged clothes. The youngest is still left fretting in the cradle, as none of the elder ones seem inclined to take it up and attend to it. Presently, one is despatched for three pennyworth of hot rolls, and another for half-a-quartern of butter, half an ounce of coffee, and a quarter of a pound of sugar. One of these messengers generally returns with the unwelcome intelligence, that the people at the shop refuse to trust them till the old score is cleared off. He is then sent to the father's master, to draw a shilling on account, the mother thus tutoring him, "Mind you say your daddy is poorly, and that we have not a bit of bread for breakfast; and if master asks why the shoes are not sent home, tell him he shall be sure to have them some time to-day; don't you say a word that your daddy was out yesterday."

The father, a haggard, pale-faced man, now makes his appearance at the door, his waistcoat unbuttoned, his shoes down at heel, and a pipe in his mouth. Thus he yawns away the time, till, after various delays, the breakfast is put on the table, it cannot be said arranged, for no respect whatever is paid to order, decency, or cleanliness.

Before the father takes his seat at the breakfast table, he snatches up the five farthings change from the anticipated shilling, and fumbling out a stray halfpenny from the corner of his pocket, slinks off to the Rose and Crown. On his return, his breath too plainly indicates what was his errand there. And now the little unwashed rabble crowd round the table, snatching at the rolls, picking at the butter and sugar, and upsetting the tea-cups, and getting sometimes a slap from the mother, an oath from the father, or a scuffle among themselves. Before the meal is finished, the clock strikes nine, and one or two of the bigger boys are driven off to school, with a lie in their mouths to excuse themselves to their master for their late appearance. The girls are sometimes sent, or sometimes kept away, either to mind the baby, or because their frocks are not fit to be worn, or any other of the ready excuses that are always found in the mouths of slatternly mothers and negligent children. Those who remain are turned into the plot, miscalled a garden, or into the lane, to rout about in the dirt like little pigs; while the mother, in her unswept room, and surrounded by the litter of breakfast, sits down to bind a pair or two of shoes, on the payment of which she depends for the family dinner. The husband perhaps sits down to work, or perhaps strolls out to the public-house; the former most frequently occurs towards the end of the week, when resources run low, or when the master has become clamorous for the work in hand. The fire is usually suffered to burn out, and has to be lit again to boil the potatoes or the bit of bacon, often at the expense of another halfpenny fagot; or, perhaps, with a murmur at the hard times, which prevent a poor family from having a bit of meat, the price of the shoe binding is bartered at the chandler's shop for a loaf of new bread and a quartern of cheese. It is well if the labours of the afternoon furnish another meal of any kind, and at dusk the mother is seen leaning over the hatch, with her arms under her apron, her hair as blowsy, and her face as dirty as ever, gossiping with any one who happens to go by, and occasionally scolding or humouring her children. The husband is at this time most likely taking his nightly carouse at the public-house, and the children wandering in the lane, or stirring up the mud of the kennel, or throwing stones at the passengers: when they can no longer see, they are driven, unwashed, to their unmade beds, and impure bed-chamber, for they scarcely ever take the trouble to open the window, and were it not that a breath of fresh air steals in, in spite of the rags and paper stuffed in the numerous broken panes, the family would be still more than they are the subjects of disease.

But it may be asked, Does the mother never clean herself, or her family, or her house? Oh yes; Saturday evening commences what she calls her thorough rout. Her first concern is, when her husband has received the remains of his wages, to waylay him, and obtain as much as she can, before he goes into the beer-shop, or public-house. The first purchases are, a quarter of a pound of soap, and a bit of firing. It need scarcely be observed that the chandlers and grocers take care to keep the soap moist in order to add to its weight,

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and that being used in this state, it melts away very soon. Some endeavours have been made to convince Mrs. Perkins of this and other errors in her domestic management; but she always replies, that it is of no use to talk; poor people cannot afford to buy soap three pounds at a time, and cut it up for drying. The children are to be sent to bed early, in order that their clothes may be washed; against this necessary measure they generally rebel, and are bribed into compliance by a few halfpence for gingerbread and lollypops. The mother then begins her laundry-work. A red pan, used also for the washing of dishes, when they are washed, fills the place of a wash-tub; and in a small quantity of water half heated, and by a dim light, that would render it impossible for the best laundress to wash them clean, the soap is promiscuously laid on, and the clothes carelessly rubbed through and wrung out, and laid on the bushes to dry. John, perhaps, comes home late, and his wife, vexed at his absence, and having got a little money in her pocket, generally comforts herself with a glass of gin and water. Next morning all is bustle: there are the clothes to be ironed, and the house to be cleaned, and something nice to be got for dinner; and the boys saying they must be dressed in time for church, or the master declares he will turn them out of the school. While the mother is ironing, one is sent in one direction, and one in another, to purchase eggs, flour, meat, and other articles, as far as their resources will allow. If a bit of soap remains, the boys are allowed to wash with it; if not, the suds of last night's washing serves to take off a little of their outside filth; and a shirt and stockings that have passed through the weekly ablution, give them a somewhat more decent appearance, though at best, the master is obliged to keep them in what he calls his ragged regiment. While they are at church, the mother and her girls are drudging over the cookery, which is generally a baked joint of meat and a pudding. Then the dishes are washed up, and the house is swept and mopped, or, perhaps, scoured. A few minutes before dinner time, the father comes down from his lair, and shuffles along to the barber's, to get shaved. Dinner over, he sits at the door and smokes, or drops asleep by the fire, while his wife makes the beds, washes and dresses the little children and herself, and the girls curl their hair, plait their frills, and bedizen themselves in any bit of trumpery, second-hand finery, they may have been able to procure. In the evening they take a stroll; the boys go bird's-nesting or cricketing, the girls join their school-fellows in the public walks, the mother goes to chat with some of her neighbours, and the father finishes the day at the public-house.

On Monday morning the family generally wakes to destitution, unless some fragments remain of yesterday's meal. Nothing can induce John Perkins to work until every farthing of his wages is exhausted, and the publican refuses to add to his score; he then goes sulkily to bed, sleeps off the effects of his carouse, and about Wednesday or Thursday rouses himself to two or three days of industry, which, if carried through the whole week, might, with good management, maintain his family in respectability and comfort. Until his working fit comes on, the supply of the family depends on the scanty earnings of their mother, or the precarious relief which they can beg or borrow of their neighbours.

The neglected and destitute appearance of the children has often excited compassion, and they have received many presents of clothing from benevolent societies, or from charitable ladies, who have sent them the left-off clothes of their children. But, than, it has been observed, that these clothes have been left to go to destruction for want of mending; or, perhaps, taken to the pawnbroker's. And thus charity has been discouraged, from the very reasonable conclusion, that it is impossible to help those who will not help themselves.

I must not omit to observe, that every quarter-day is a season of peculiar difficulty. It probably never enters the mind of Mr. and Mrs. Perkins, to think how greatly their comfort and respectability would be promoted, by laying aside the money weekly, and having it ready to pay their landlord. However, when the day comes, the landlord applies, and as no money is forthcoming, he threatens to seize their goods. But he is a kind-hearted man, and does not like to drive matters to extremity; besides, such is the dirty, shabby condition of all the goods, that though they have originally cost a good deal of money, it may be questioned if they would now be worth the

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expenses. He therefore grants them a little delay; a petition is drawn up, making out a pitiful case of sickness, want of work, or any other plea that seems less stale and more plausible; and the money is collected by shillings and half-crowns, from the houses of the charitable gentry.

I am really sorry to deal so much in what may seem like scandal; such I feel assured is not my disposition. I can truly say, I never in my life entered Perkins's house, but with a view to give relief, or in some way do them good, and I would not expose their faults and bad management in their own neighbourhood; but as these mistakes occur in other towns besides that in which I dwell, and as I have not told, and do not intend to tell my readers what town that is, I hope they will charitably conclude, that in what I write, I am actuated by good-will to them, and not by ill-will to my neighbours. C.

THE BOTANIST.—No. II.

The names of Linnæus and Jussieu, are familiar to every one at all acquainted with the statistics of botanical science. Linnæus, a native of Sweden, who flourished about a century ago, was the first to facilitate the study of plants, by any thing deserving the name of a system. He founded his arrangement upon the structure of the flowers: it is called the *Linnean*, *sexual*, or *artificial* system. That of Jussieu, in our own day, which frequently involves a very minute and difficult investigation, is called the natural, or *Jussieuean* system.

We will not enter upon a criticism of the respective merits of these systems, but simply state, that we have adopted the classification of Linnæus in preference to that of Jussieu, because we consider it more attainable and acceptable, and, at the same time, equally useful to general students.

A system, if it be good, will greatly facilitate any complicated pursuit. This remark is especially applicable to Botany, which, without system, is intricate, confused, and perplexing, but by the help of an arrangement, a determined student may, in a few days, acquire an ascendency over all difficulties, and by a knowledge of the structure and properties of the different classes, be able to recognise the nearness or remoteness of relation subsisting between different individuals.

The student desirous of proficiency in this or any other study, should, at the outset, take a general view of the intended subject; this will very materially assist future inquiries. Indeed we cannot successfully pursue any study or train of reasoning with contracted minds. For instance, we should first of all regard the Divine Being as the origin of all things; then creation as a part of his glory; then the innumerable systems of worlds of which we are informed, with all they contain, as a part of creation; then this our earth as a part of one of those systems; then let us divide earthly matter into classes, mineral, vegetable, and animal, and then trace any one branch in its different ramifications on the same plan of gradation, as far as our feeble minds will carry us. By adopting this method of study, we shall more readily acquire knowledge, and that with increased pleasure and profit.

We have previously remarked, that the discrimination, or recognition of plants, is a very important part of Botany: we cannot, however, at this time, enter upon it without exceeding our limits, as a treatment of this subject would involve descriptions of the various parts of a plant: we therefore confine ourselves to that part which is necessary to illustrate the classification of Linnæus, that is, the *flower*.

It differs in form, colour, and number of its parts, but generally comprises the *calyx*, which is a leafy envelope for the protection of the tender and immature corolla. The *corolla* is generally a coloured, delicate texture, designed to foster the yet more delicate parts of reproduction; these are, the *stamen*, or part which contains the fertilizing dust, called farina; and the *pistil*, or part which receives the farina.

The stamen has two parts, the *filament* and the *anther*.

The filament is the support to the anther, and the anther is the part charged with farina.

The pistil has three parts: the *germen*, in which are the rudiments of the seeds; the *style*, which is the channel of communication between the *germen* and the stigma; and the *stigma*, the part which, being covered with a moist, viscid substance, secures the farina as it falls from the anthers, whence it is conveyed to the germen.

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Now, upon some circumstances connected with these two parts, the stamen and the pistil, which we will mention, are founded twenty-four classes or divisions, into one of which every individual of the vegetable kingdom may be placed.

The first class, *Monandria*, includes those plants whose flowers have only one stamen besides the pistils, (see fig. 1,

Fig. 1.

pistil and stamen,) which constitutes the whole flower of the *Hippuris vulgaris*. This class is not numerous.

The second class has two stamens besides the pistils, and is called *Diandria*, (see fig. 2.) Flower of *Veronica*, or speedwell.

Fig. 2.

The third is a very important class, comprehending corn and grass; also many beautiful bulbous-rooted plants, gladiolus, ixia, crocus, iris, &c. It is called *Triandria*, having three stamens, (see fig. 3.)

Fig. 3.

The fourth, *Tetrandria*, (flower of grass,) whose flowers have four stamens *of equal length*, contains the different species of *Galium* or bedstraw, clivers, &c. The illustration of this class (fig. 4) is the flower of the *Cornus*, or dogwood, a shrub common in our hedges, the wood of which is used for making butchers' skewers.

Fig. 4.

The fifth class, *Pentandria*, is numerous and highly important. We find in it the valuable potatoe; also the *Hyoscyamus*, *Belladonna*, *Asafœtida*, and others, useful indeed as medicines, but highly dangerous in the hands of the unskilful. This class also comprehends the extensive tribe *Umbelliferæ*, so called from their flower-stalks proceeding from a common centre, after the manner of an umbrella. The carrot, celery, parsnep, carraway, parsley, cardamom, and many others, fall under this description. In this class are also contained the intoxicating herb tobacco, employed by many as a substitute for opium; and so many other dangerous and poisonous species, that the student should handle them with great caution until he becomes acquainted with their several characters. The illustration of this class (fig. 5) is the flower of the common celery. It has five stamens.

Fig 5.

The sixth class, *Hexandria*, has six stamens *of equal length;* it furnishes many beautiful flowers, and some useful plants. The lily, the harebell of spring, the garden hyacinth, daffodil or narciss, and the onion tribe. To exemplify this class, we have given a representation of the interior of the common snowdrop, *Galanthus nivalis* (fig 6.)

Fig. 6.

Heptandria, the seventh class, claims

the magnificent *Æsculus*, or horse-chestnut; it has seven stamens (fig. 7.)

Fig. 7.

Octandria, eight stamens, contains the beautiful heath tribe, *Daphne*, &c. The example (fig. 8) is the common maple, *acer campestre*.

Fig. 8.

Enneandria, nine stamens. Of this class we have but one instance in British botany, the elegant flowering-rush, or butomus umbellatus. (See fig. 9.)

Fig. 9.

Decandria, ten stamens, not being united, contains the varieties of pink, carnation, lychnis, &c., exemplified by saponaria, (fig. 10.)

Fig. 10.

Dodecandria implies twelve stamens, but those plants belong to this class whose number of stamens is from eleven to nineteen inclusive. (See fig. 11.)

Fig. 11.

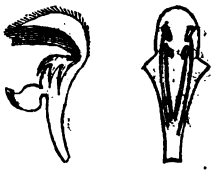
Icosandria, the twelfth, and *Polyandria*, the thirteenth, are alike in this respect, that the number of stamens in each is above twenty indefinitely. The difference is this: in *Icosandria*, the stamens proceed from the calyx, in *Polyandria*, from the receptacle. (See figs. 12 and 13.) The former contains our valuable stone fruits; the latter, anemones, poppies, clematis, water-lily, &c.

Fig. 12.

Fig. 13.

The fourteenth, *Didynamia*, which implies *two stronger*, may be mistaken by the young student for Tetrandria; it has four stamens, but two of them are longer than the other two. The flowers in this class are generally of the form termed gaping. Example, the white dead-nettle, *lamium album*. (See fig. 14.) Most of them are more or less fragrant, as mint, thyme, marjoram, hyssop, balm, lavender, &c.

Fig. 14.



Tetradynamia, implying *four stronger*, has, like Hexandria, six stamens, but four of them are longer than the other two. The turnip, cabbage, mustard, &c. belong to this class. The example given (fig. 15) is the interior of the *cardamine pratensis*, or cuckoo-flower.

Fig. 15.

The remaining classes are not determined by the number of stamens.

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Monadelphia, the sixteenth, contains those plants whose flowers have their stamens united into one group, or as the word implies, brotherhood. The hollyhock is an excellent example. We have given the meadow geranium, (fig. 16.)

Fig. 16.

Diadelphia, the seventeenth, contains those whose stamens are in two sets, as in the everlasting pea, (fig. 17.) Trefoil, or clover, vetches, lupines, &c., belong to this class.

Fig. 17.

Polyadelphia, the eighteenth, contains those whose stamens are united into many, that is, more than two sets. Example, Hypericum, or St. John's wort (fig. 18.)

Fig. 18.

Syngenesia, the nineteenth. This class contains what are termed compound flowers, several small yet perfect florets composing one whole, and being enclosed in a common calyx. The essential character of this class is, that the anthers of the florets are united into a cylindrical form, and each floret has a single seed below the receptacle. The dandelion, chinaster, marigold, and sunflower are familiar examples. We have given the common daisy, (fig. 19,) *a* a floret of the disk

Fig. 19.

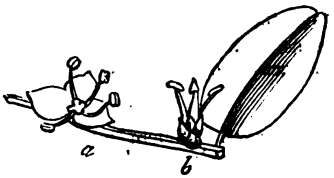
or centre, *b* a floret of the ray. It will be seen that each, especially fig. *a*, is a complete flower of itself.

Gynandria, the twentieth. The stamens in plants of this class proceed from the pistil, as in the passion-flower, (fig. 20.) The orchis tribe belongs to this class.

Fig. 20.

Monœcia, the twenty-first class. Here the pistils are found in one flower, and the stamens in another, but both on the same plant. Example, the box-tree, (fig. 21,) *a* a stamen flower, *b* a pistil flower.

Fig. 21.



Diœcia, the twenty-second class. In this class, not only are the stamens and the pistils found in separate flowers, but all the stamen-bearing flowers are on one plant, and all the pistil-bearing flowers on another plant, only the latter producing the fruit of the species. Example, the yew-tree, *taxus baccata*, (fig. 22,) *a* the

Fig. 22, *a*.

stamen bearing blossom, *b* the pistil

Fig. 22, *b*.

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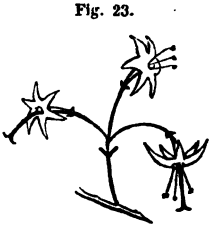
bearing blossom, which is the rudiment of a berry: both are magnified.

To the twenty-third class, *Polygamia*, belong those plants whose flowers seem to be subject to no law of regularity, in the arrangement of the stamens and pistils. In some of the flowers are stamens only, in others pistils only, in others both stamens and pistils, (fig. 23.)

Fig. 23.



The twenty-fourth class, *Cryptogamia*, contains that branch of vegetation, whose reproductive organs are undefined or indistinct, as the term implies. Fungi or mushrooms, moss of all varieties, ferns, sea-weeds, lichens, &c., belong to it.

Now that the student may be able to determine to what class any plant belongs, let him pursue the following course. First, ascertain whether it has a simple or a compound flower: by the term compound, applied to a flower, is meant one that belongs to the class, *Syngenesia*. If simple, whether both stamens and pistils are present in every flower; if they are not, it will belong either to 21, 22, or 23. If in every flower there are present both stamens and pistils, observe whether the stamens are united into one or more sets; if so, it will belong either to 16, 17, or 18. If they are not united, nor are produced upon the pistil, count them, bearing in mind the difference between 12 and 13, 4 and 14, 6 and 15. This process is simple enough, and cannot fail of conducting to a correct result.

The substance of this paper well considered, as it may be in a few hours, the student has made an important acquisition, and may cheerfully proceed, assured that he is going an easy way to obtain rational pleasure and improvement.

In the next paper we purpose illustrating the first subdivision of this system, called the *Orders*. In the meantime, kind reader, if you are disposed to view nature with an intelligent eye, and if you deem the present attempt in any measure calculated to assist you, endeavour to understand what is here laid before you, by making it, as far as is practicable, matter of experiment. You may find even at this season of the year, when winter still lingers with us, many objects in the vegetable kingdom adapted to excite your admiration, in whatever direction you may feel disposed to rusticate; but the walk most prolific in objects of botanical nature will be along a lane, where the elevated hedge-bank luxuriates in the morning sun. You should provide yourself with a tin botanizing box of convenient size, in which, if you have a garden for transplanting, you may carry a garden trowel. Thus equipped—and of such an accompaniment no one need be ashamed—you set out for your ramble, whether it be for an hour, or for more; your object may be either to find the locality of some particular plant, or to fill a budget of whatever may be to you new and unexplored, which you may bring home, and at leisure investigate. And you may be assured that the most despised leaf, or insignificant morsel of moss, or a single bud of a tree, will amply reward the most diligent scrutiny. You will find a pocket lens to be very serviceable in your examinations of the minute parts of the flower, &c., if you should not be fortunate enough to possess a proper botanical microscope. Such researches, besides the immediate pleasure they will impart to the student, will greatly assist his subsequent progress.

The following plants will probably flower in the course of this month:—

CLASS DIANDRIA. — *B. *Veronica agrestis*, wall speedwell. TRIANDRIA.—B. *Crocus*, of different varieties. HEXANDRIA.—B. *Galanthus nivalis*, the snowdrop. OCTANDRIA.—B. *Daphne Mezereon*, the mezereum. POLYANDRIA.—†G. *Helleborus niger*, the Christmas rose. G. *Helleborus hyemalis*, the Winter aconite. G. *Hepatica triloba*, white, red, and blue. DIDYNAMIA.—B. *Lamium album*, white dead nettle. B. *Lamium purpureum*, purple do. TETRADYNAMIA.—B. *Draba verna*, early whitlow grass, grows on old walls. DIADELPHIA.—B. *Ulex Europæus*, the common furze or gorse. SYNGENESIA. B. *Senecio vulgaris*, the common groundsel. B. *Bellis perennis*, the daisy. B. *Tussilago petasites*, the white butter bur.

The investigation of these, and whatever may ocur in the class Cryptogamia, will afford abundant employment for the present month to the lover of botany.

* B. British or wild. † G. grows in gardens.

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ELECTRICITY FROM MAGNETS.

It is commonly supposed that electricity resides in all substances, each kind of matter having it in a fixed amount, and in a particular condition. When thus united with material existence, as a necessary element, it is, in reference to all our sensations, latent; and if it had not been separated from the matter with which it is combined, we could not possibly have been acquainted with its existence. We may illustrate our remarks on this subject by a comparison of electricity and heat. When we place a liquid over the fire, and expose it to a temperature greater than its own, the effect produced is soon made evident to the sense of touch. When the finger is plunged into a liquid thus acted upon by heat, we become conscious of a different state, and are accustomed to say, that its temperature has increased, or, in other words, that it is hotter. This is an effect produced, when heat is acting as a free agent; but there are times when it is so intimately connected with matter as to be altogether incapable of affecting the sense of touch, and is then said to be latent. Thus a vapour or a gas possesses a certain amount of heat necessary to support its condition, the removal of which will, in fact, change its state.

Let us take steam as an example.

Steam is formed by the addition of heat to water at the boiling point, that is 212 degrees. Under the common pressure of the atmosphere, water cannot be raised to a temperature greater than 212 degrees, and yet heat may be communicated to the liquid long after this has been done, and must produce some effect. Every one knows that it causes the formation of steam. But the steam is not hotter than the water, so that the heat must be in some manner connected with the particles of water in a latent state. For a further explanation of this subject, the reader may refer to a paper on "The Tea-kettle," *Visitor*, 1837, p. 91.

Now, electricity exists in all substances in this latent state, but may be disturbed or set free in various ways, and it is only then that we can acquire any knowledge of its properties and effects. When two substances are rubbed together, their electric condition is disturbed. This means of obtaining free electricity was first discovered; and the agent thus developed is called common or ordinary electricity. For many years scientific men were experimenting with the electrical machine without suspecting that any other means of obtaining the agent could be found. It was, however, discovered accidentally, that by the contact of metals and chemical action, the same agent was developed, producing effects sufficiently analogous to those of the common electricity to identify it as the same agent, yet vastly superior in many respects in its powerful control over matter.

In the year 1824, Seebech discovered that when a circuit of perfect metallic conductors is formed, and unequally heated, the electrical condition is disturbed. This effect does not depend on any peculiarity in the metals, their contact or juncture. In the same year Yelin succeeded in an attempt to obtain electricity from a single metal. From his experiments it appears that electricity may be obtained from any metallic substance, when unequally heated. To distinguish the agent derived from this source, it is called thermo-electricity.

Another and a fourth source of electricity has long been known; we refer to the electrical fishes. It appears that certain fishes are furnished with organs by which they are able to accumulate and discharge electricity. Such is the power of some of them in this respect, that it would be unsafe to receive a discharge from a full-grown and active fish. (See *Weekly Visitor*, for 1834, p. 447, 455.)

We come now to the fifth source of electricity, and that which is the immediate object of our attention in this paper. Many of our readers are aware that electrical effects have been obtained from magnets. A large apparatus has been long exhibited in the Gallery of Practical Sciences, by which many curious experiments were shown. This arrangement, however, has been superseded by one invented by Mr. Clarke, the philosophical instrument maker. But before we proceed to a description of this instrument, and the experiments which may be performed with it, a few remarks will be required upon the means by which we may identify the electric agent. The effects obtained by the rotation of the armature of a magnet, forming and breaking contact with the poles, has been called magneto-electricity. How do we know that electricity is the cause? To this question we reply, because it produces results similar to those obtained from that agent, in whatever manner it may be developed. The effects of elec-

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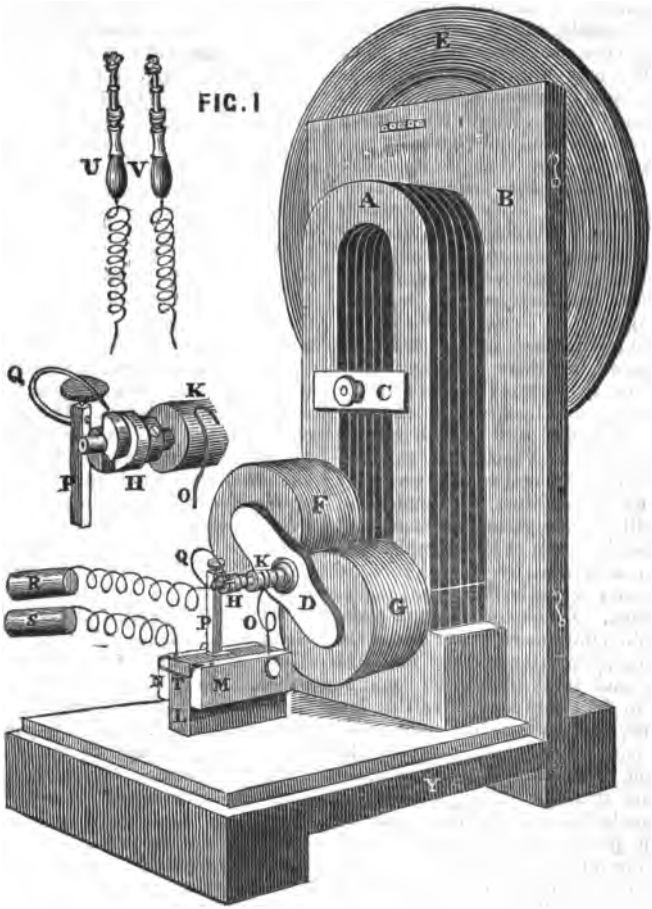
tricity are the evolution of heat, the exhibition of magnetic properties, chemical decompositions, and an effect upon the animal system, when made the medium of its transit from one substance to another. Now, all these are the results of that agent developed by magnets, and therefore we are justified in the conclusion that it is electricity.

The construction of the magneto-electrical machine, that is, the instrument by which the magneto-electricity is obtained, may be understood by reference to fig. 1. A is the magnetic battery,



consisting of six horse-shoe magnets fixed vertically, and supported by the board B. C is a brass bar and screw, by which the magnets are brought into close contact with the board. By this arrangement the battery is kept in a firm position, and in the event of any disarrangement may be easily removed, without disturbing any other part of the machine. D is the armature which is connected with a mandril, passing between the poles of the magnet. This armature is put in motion by the multiplying wheel E. Round the cylinder of the armature copper wire is twisted, and the effects obtained by the machine depend on the length of the copper wire twisted round the cylinders. There are some results which can only be obtained by a quantity of electricity, and others by intensity. To obtain chemical decompositions and to give a shock, intensity is required; to

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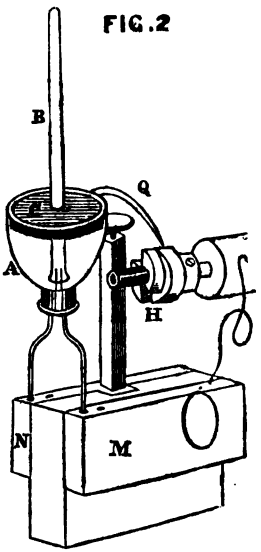
evolve heat, and to render soft iron magnetic, quantity must be obtained. The inventor of this machine has provided an arrangement, by which both may be obtained by two different armatures; one he calls the intensity, and the other the quantity armature. The former has two coils of fine insulated copper wire, 15,000 yards long, bound round its cylinder, the latter only forty: so, also, the amount of iron employed in the construction of the cylinders, is smaller in the intensity than in the quantity armatures; but the connexion of the wires is the same in both. The commencement of each coil of copper wire is soldered to the armature D, from which projects a brass stem, (also soldered into D,) carrying the break-piece H. The break-piece H is made fast in whatever position is required, by a small binding-screw. K is a hollow brass cylinder, to which the termination of the coils F G are soldered, being insulated by a piece of hard wood attached to the brass stem. O is an iron wire spring pressing against the hollow cylinder K at one end, and held in metallic contact by a nurled head-screw in the brass strap M, which is fixed to the wooden block L. P is a square brass pillar, fitting into a square opening in the other brass strap N, and secured at any convenient height required. Q is a metal spring that rubs gently on the break-piece H, and is held in perfect metallic contact by the nurled head-screw in P. T is a piece of copper wire for connecting the two brass straps M N; then D, H, Q, P, N, are in connexion with the commencements of each coil, and K, O, M, with the terminations.

The latter part of this description we have given as an extract from the inventor's explanation of his machine in the Annals of Electricity. We may now proceed to explain one or two experiments which may be made with the intensity armature.

To give a shock. R and S, fig. 1, are brass conductors. The end of the wire connected with one of these is placed in the hole of one of the brass slips M or N, and the wire of the other into a hole that is formed at the end of the brass stem, which carries the break H. M and N are united by a wire T. If the person to receive the shock, take hold of the brass cylinders R in one hand, and S in the other, he will experience a violent shock as soon as the multiplying wheel is turned. U and V are directors, used for applying magneto-electricity medicinally.

To decompose water. Water is a compound substance, formed of the two gases, oxygen and hydrogen. By electricity it may be decomposed, resolved, in fact, into its two elements. The gases may be either collected together in one tube, or separately, in a tube provided for each. Fig. 2 is a representation of

FIG. 2



the apparatus for the collection of the gases in one tube. A is a glass cup, with a wooden bottom, through which two pieces of copper wire with platina points are passed. The tube B being filled with water, and the vessel partly filled, the open end of the tube is placed over the platina wires, in which position it will be supported by the cork C, and the copper wires with which they are connected are fixed in the points M and N. The spring Q must then be so fixed as to rub on the cylindrical part of the break, and as soon as the wheel is turned the gases will begin to rise, and will soon entirely fill the tube, driving the water into the glass vessel.

Fig. 3 represents the apparatus used to collect the gases separately. The glass vessel is similar in construction to

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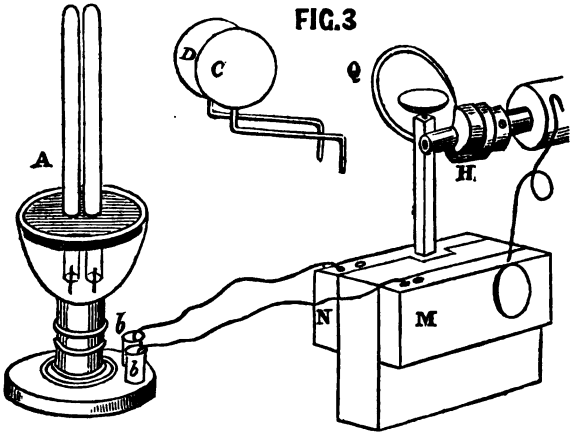
that already described, except that the copper wires, instead of terminating in the points M and N are soldered to the two brass cups *b b*. Into these cups

FIG. 3



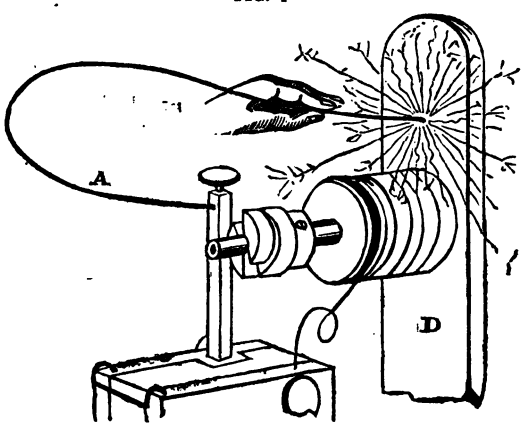
mercury is placed, and they are connected with M and N by copper wires. The object in using mercury is to secure a perfect communication between the two instruments. Q is the spring working on the single break H.

C and D, shown in fig. 3, are platina discs with copper wires, used to prove that other chemical decompositions may be produced by the magneto-electricity. If a piece of turmeric paper be wetted with some neutral salt, and placed between them, its decomposition will be evident by the change of colour, as soon as they are connected with the machine.

EXPERIMENTS.

To scintillate iron wire. Brilliant scintillations of iron wire may be easily produced with the magneto-electric machine. An iron wire, A, is connected at one end with an upright, (P, fig. 1.,) as shown in figure 4, the other end being

FIG. 4



gently pressed on the surface of the rotating armature. The brilliant combustion thus produced is effected, we are informed by the inventor, in consequence of the wires being soldered to the armature. This fact is the more worthy of notice, because it was long supposed by those most acquainted with electrical phenomena, that the union of the wires and armature would entirely destroy the effect, instead of increasing it.

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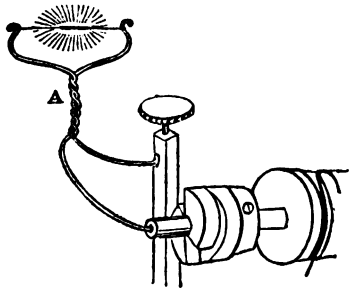
To make platina wire red hot. The

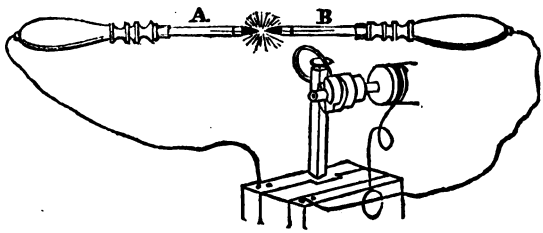
FIG. 5



arrangement for heating platina wire is represented in figure 5. A is a piece of wire, one end of which is connected with the upright, P. fig. 1, and the other is placed in the hole at the end of the break-piece, (H, fig. 1.) Almost immediately after the circuit is formed, the platinum wire exhibits a red heat, and while in this state, it will explode gunpowder, or inflame ether and other combustible substances.

To ignite charcoal. A and B, fig. 6, are two directors through which are passed wires connected with the machine at the points M and N, fig. 1. To the ends of the directors, charcoal points are fixed; and when these are brought together, a splendid star of light is produced.

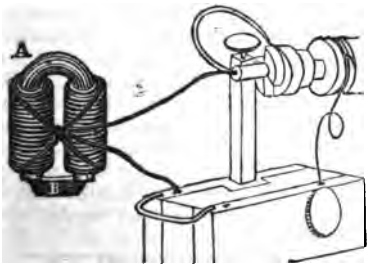
FIG. 6



All these experiments exhibit the power of magneto-electricity in the production of heat, and at the same time they show that light may also be evolved by the same agent. But there is yet one other effect which may be obtained, and that is the production of magnetism.

It has been long known, that electricity is capable of inducing and destroying magnetism, but it was little thought that the electricity derived from magnets would ever e employed for the formation of other magnets. The connexion between magnetism and electricity cannot be more strikingly exhibited than in the experiment represented in figure 7.

FIG. 7



A is a piece of soft iron, round which insulated copper wires are coiled; the ends of these wires are brought into contact with the machine in the manner already described, and as soon as the electric current begins to circulate, magnetism is induced, and the armature B is attracted to the poles. This is called an electro-magnet. Its power is only temporary; for immediately the circuit is broken, the magnetism is lost, and the soft iron is left in the same state as it was previous to its connexion with the machine.

These are some of the most striking experiments to be made with the magneto-electric machine, but they may be modified in various ways by the experimenter.

UNSANCTIFIED INTELLECT.

INTELLECTUAL attainments and habits are no security for good conduct, unless they are supported by religious principles. Without religion, the highest endowments of intellect can only render the possessor more dangerous, if he be ill-disposed; if well-disposed, only more unhappy—*Southey.*

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OLD HUMPHREY ON ATTENDING THE SICK.

HAD I my will, every man and woman, aye, every child too, above seven years old, in Great Britain, should be in some measure qualified to wait upon the sick. But why should I limit my good wishes to Great Britain? I would extend them to the wide world; for the sick in one country require alleviation and comfort as well as another.

The proper end of education is to give us a knowledge of our duty, and to make us useful in our generation. Where, then, can we be more useful than at the couch of sickness and pain?

It is not the wish of Old Humphrey that every one should become a nurse, and understand the whole mystery of caudle-making and saucepanry: all that he desires is, that every one should be moderately endowed with the most necessary qualifications to alleviate and comfort the sick.

Show me one that has never received the assistance of others when in sickness; one who has neither father, mother, sister, brother, nor friend on the face of the earth, and I will excuse him from being over anxious about this matter; but all who have kindred, or have received kindness, are bound, according to their ability, to qualify themselves to be useful to others. Must not he have a hollow heart who would help a friend while he could swim, but neglect him when he was drowning? And is it not a little like this, to behave kindly to others in health, when they can do without our kindness, and forsake them in sickness, when they require assistance?

A cup of cold water to the weary and thirsty traveller is welcome indeed, and the most trifling attention to the sick is oftentimes a cordial to the fainting spirit. When the strength fails; when the grasshopper is a burden; when the silver cord is about to be loosed; when the golden bowl, and the pitcher at the fountain, and the wheel at the cistern, are near being broken—when the dust appears ready to return to the earth, and the spirit unto God who gave it, it is then meet that every kindness should be shown to the sufferers.

We are all liable to be dependent on the attentions of others, and we should all therefore be qualified to attend to others. Those who in sickness have felt the relief of a well-timed cup of tea, or a small bason of well made gruel, wine-whey, or barley water, will not laugh at Old Humphrey for talking about such things; and if they should do so, he would, notwithstanding, gladly make them a cup or bason of any of these comforts, should their situation require it.

How many hundreds of people are there in the world, who would not know how to make these common-place comforts, however urgent might be the necessity that required them at their hands?

Is it difficult to teach even a child to put two spoonsful of tea into a pot, and pour boiling water over it; to let it stand a few minutes, and then pouring it off, to add to it a little sugar and milk? Certainly not; yet how few children are taught to do this properly!

Nor is it more difficult to boil half a pint or a pint of milk in a saucepan, and then to pour into it a wine glass full of white wine: thus making that wine-whey, which only requires to be strained from the curd to be ready for an invalid. How many grown-up persons would not know how to set about this!

I know twenty people, as old as I am, who could not, without some instruction, make a decent bason of gruel; and yet how easily is this performed! While water is boiling in a saucepan, a large spoonful of oatmeal is mixed up in a bason with a little cold water; the hot water is then poured into this, when it is left to settle: it is afterwards poured, leaving the husks at the bottom behind, into the saucepan, and boiled slowly, while being stirred round with a spoon. Or, where groats can be obtained, gruel may be made much easier, by pouring boiling water on the groats, and letting them simmer over the fire till the fluid is of the degree of thickness which is desired. This is gruel; and when sweetened with a little sugar, or seasoned with salt, is an excellent food for a sick person. How is it that every one is not capable of rendering such a service in an extremity, when it may be done with so little trouble? There are many other little comforts that are provided as easily as these, but surely a knowledge of those that I have mentioned is not too much to be required of any one. If you have the right sort of affection for those who are dear to you, you would not willingly let them lack, in a season of affliction, any service you could render them.

Come, Old Humphrey will make a few remarks, that will help you, if you

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are disposed to add to your qualifications, to soothe the afflicted. If ever you are called to attend a sick-bed, be sure to manifest *kindness;* without this quality, others will lose much of their value. Be *tender*, not only with your hands, but with your tongue: tenderness of heart is quite necessary. Be sure to exercise *patience;* if you cannot do this, you are not fit to attend the sick. *Forbearance*, too, is a great virtue. Sick people are often fretful and trying, and require to be borne with. *Cleanliness* is essential: a dirty cup, a bit of coal in the toast, or a hand begrimed with dirt, is enough to turn the heart of an invalid. *Expertness* and *promptitude* are of great value, that the wants of the invalid may be supplied without delay. *Thoughtfulness* must be practised, that you may anticipate what will be required; and *watchfulness*, that you may know when to be of service. Be *sober*, as beseemeth an attendant on the sick; but be also cheerful. *Cheerfulness* is as good as medicine to the afflicted. *Firmness* and *prudence* are qualities that may at times be put to good account; and if, in addition to those I have mentioned, you have *sincere and lively piety*, ever desiring to keep the eye, the heart, and the hopes of the sufferer fixed on the Great Physician, the Healer of the soul's leprosy, as well as of the body's ailments, why then your attentions may indeed do good; they may be the means of benefiting both body and soul.

And think not that you can benefit the sick without doing a service to yourself. You may learn many a lesson in a sick chamber, that would never have been taught you in other places. "It is better," on many accounts, "to go to the house of mourning than to go to the house of feasting." We learn more of this world's hollowness, in an hour under the roof of sorrow, than in a life spent in the habitation of joy.

To witness sanctified affliction is a high privilege, for we then see that "neither death, nor life, nor angels, nor principalities, nor powers, nor things present, nor things to come, nor height, nor depth, nor any other creature, shall be able to separate us from the love of God, which is in Christ Jesus our Lord."

Old Humphrey has attended the sick, both in the noontide and the midnight hour; the desponding sigh, the weary moan, and the groan of agony, are familiar to him. He has marked the changes from the first attack of sickness to the death-gasp that ended the mortal strife. The declining strength; the labouring pulse; the glazed eye; the throat-rattle, and the fallen jaw. He has closed the eyelids of youth and of age; and having felt, painfully felt, his own deficiencies as an attendant on the sick, he the more anxiously urges on others, the duty of qualifying themselves to soothe the sorrows of the afflicted, and to smooth the bed of death.

OLD HUMPHREY'S ADVICE TO BE PONDERED IN HEALTH AND PRACTISED IN SICKNESS.

It sometimes happens, that I am requested by correspondents to write on particular subjects: when I fail to do so, I hope that a kind interpretation is put upon the omission. Happy is he whose hands can execute one-half of his heart's undertakings!

I have already said something for the consideration of those who may be called on to attend the sick; and I now have a word or two that may be suitable to the sick themselves.

Do not imagine me to be so unreasonable as to expect the sick will read my remarks. Oh, no! I neither expect nor desire them to do so. The afflicted, if they can read at all, ought to read, mark, learn, and inwardly digest, far better words than the words of Old Humphrey. What I want is, that my observations, poor and imperfect as they are, may be attended to by those who are well; that in case they should be laid on a bed of sickness, they may profit by the friendly advice that I venture to offer them.

It may seem an odd conceit, to sow in health and to reap in sickness; but for all that, it will be a profitable kind of husbandry. The ant and the honey-bee lay up for a dark and wintry season; and why should not the Christian? You may feel strong while you read these lines, but, alas! a time is coming, with hasty strides, when "the keepers of the house shall tremble, and the strong men shall bow themselves."

We are not half thankful enough for the blessing of health. We can give with alacrity a piece of gold to an earthly physician, and feel thankful if he can moderate our pains for a day, or even an hour; but are we equally grateful

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to our heavenly Physician for months and years of uninterrupted health? Now answer this question before you go on any further.

To a sick person it is a great comfort when attendants perform their kind offices with willingness; for an unwilling attendant is oftentimes a sad trouble to an invalid. Now, sick persons may do much to make their attendants either willing or unwilling in the office they have undertaken. In sickness, such is our infirmity, that selfishness is almost sure to increase, and judgment and consideration, with regard to others, to diminish; it therefore becomes the more necessary that, while we are well, we should know how, when we come to be afflicted, to avoid the error of driving from us our kindest friends, or of drawing down upon us the negligence and churlishness of our common attendants.

If in sickness you have ever had your pillow smoothed, and your gruel presented by a kind hand; or if your nauseous medicine has been made doubly nauseous by the rude remark of an unkind, unfeeling, dirty, and negligent nurse, you will think this a point of some importance. I may not succeed in the object that I have in view; but at least I will pursue it with earnestness, with kindness, and with integrity. The subject requires to be treated with fidelity and tenderness.

Sick persons in their afflictions are apt to forget that, from necessity, it cannot be so pleasant even to their dearest friends to approach them, as it was when they were in health. Disease, wounds, sickness, ejaculations of pain, tainted breath, and perspirations, are of themselves forbidding; and though affection and kindness will gladly endure, and seek to relieve them, yet the invalid should remember that these things are trials to their attendants.

I have seen a sick father press his fevered and tainted lips to the pale face of his attendant daughter, when consideration and judgment would have prevented such an ill-timed and dangerous proof of affection. I have known a sick mother grasp an affectionate son with her clammy hand, holding him over her till he has been compelled to draw back. A momentary pressure of the hand would have been better. Am I unfeeling in my remarks? I ought not to be so; for I have been borne with when the yearnings of affection, tugging at my heart-strings, have made me somewhat unreasonable; but, surely, if we love or respect those who minister to us in our afflictions, we should be as little burdensome to them as possible. Consider for a moment the difference between one who springs forward with alacrity to serve you in sickness, and another whom you have discouraged, and wearied, and estranged, by selfish waywardness and want of consideration.

Sick persons have usually an inclination to dwell on the subject of their infirmities, till the ear of affection itself becomes weary: they seem to say, "I will not refrain my mouth; I will speak in the anguish of my spirit; I will complain in the bitterness of my soul."

The remark, "I never had so wretched a night," or, "I thought I should have died," may be listened to with sympathy, if only occasionally used; but if it become the regular, daily, and hourly complaint, attended with a particular account of distressing feelings and visionary fears, it afflicts the ear without exciting the pity of the heart. This is an error too common to have escaped your observation.

Sick persons, especially if they are timid and fearful in their disposition, often give way to the expression of what they feel under slight attacks as freely as they do under more trying afflictions; thus they not only defeat their own object of exciting sympathy, but also render the hearts of their attendants callous, when they are visited with heavy calamity.

Sick persons are often rendered hasty and peevish by their painful maladies, and then they are unreasonable in their expectations, and severe and unjust in their rebukes. If the sick were conscious of these infirmities, they would more frequently correct them. "What a time you have been!" is discouraging to a prompt nurse. "You are weary of me, and want me gone!" will drive away a domestic that is not patient, while, "You are very kind," or, "Bear with my hasty temper a little longer, for I am heavily afflicted," will draw that domestic to the couch of the sufferer.

Sick persons of fearful dispositions are fond of sending for the doctor more frequently than necessary, without considering that if a medical man have his daily arrangements, or his nightly rest broken

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for nothing, he may be backward to attend when his services are really necessary.

These are a few of the many observations that might be made; and such as are in the habit of visiting the sick will not consider them undeserving of attention. Whether we are ill, or whether we are well, we should not be forgetful of the comfort of those around us; but, on the contrary, we should ever remember to do to others as we would they should do unto us.

Who is there that has not sickness in prospect? and who would not wish, when sick, to secure the willing attentions of his kindest friends?

Persons who have any one to love, and any thing to leave, will save themselves much anxiety in sickness by making their wills while they are in health. Many foolishly neglect to do this from different motives, but I have already noticed this subject. (See page 13.)

Though I have confined myself to observations on temporal matters, I am not unmindful how closely the subject of sickness is connected with spiritual concerns. "We must needs die, and are as water spilt on the ground, which cannot be gathered up again;" and all who are subject to death should now seek, through the Saviour of sinners, that eternal life which is only to be found in Him.

If you have been visited with sickness, you know, and if you have not, you will know by and bye, how much sickness disqualifies us from attending to any thing requiring calmness and consideration. If it be difficult to lift a weight in health, it is not likely to be an easy affair in sickness. Eternal things are weighty considerations, and they should be attended to while we have health, with all our hearts, our minds, our soul, and our strength.

How calm would our sick-beds be if we had nothing else to do than to cast our burdens on Him who has promised to sustain them; nothing else to say than "Bless the Lord, O my soul, and forget not all his benefits: who forgiveth all thine iniquities; who healeth all thy diseases; who redeemeth thy life from destruction; who crowneth thee with loving-kindness and tender mercies!" "I know, O Lord, that thy judgments are right, and that thou in faithfulness hast afflicted me." "Thou shalt guide me with thy counsel, and afterward receive me to glory."

THE PHILOSOPHY OF COMMON THINGS.

COAL-GAS.

The introduction of coal-gas as a means of illumination, may be considered one of the most successful applications of science in modern times. Its advantages are many. Before it was commonly adopted, oil lamps were used; but these are very inferior to gas for all the purposes required. The use of oil is attended with much trouble. The trimming of the lamps in which it is burned, and cleansing the glasses which surround the flame, take up so much time as to render them exceedingly expensive. When the metropolis was lighted with oil, a great number of persons were necessarily employed in preparing the lamps. A parish which needs but one person to superintend the gas-light, required from four to six to keep the lamps in order; and in shops and warehouses there was a proportionate waste of time in the same offices, and in every case frequent failure from negligence or the badness of materials. By the adoption of gas as a light, all these inconveniences are removed. Two or three persons are sufficient to superintend the manufacture or generation of gas, to supply a large district; and all that is required of those who have the charge of the several burners, is to apply a light to the stream of gas, to keep the glasses clean which are placed round it, and to prevent the access of violent currents of wind.

Another advantage in the use of gas is, its safety. When lamps or candles are used, there is a danger of sparks falling and setting fire to the articles on which they are thrown, if at all combustible. If an ordinary degree of care be used in the manufacture and use of gas, no means of artificial light is half so free from danger. Some distressing accidents have recently occurred from culpable inattention in the manufacture. When the coal-gas is mixed with the atmospheric air, it becomes most explosive; and when an ignited substance is introduced into the reservoir of gas or an apartment containing this compound, a violent explosion will be produced. One or two instances in which this has happened may be mentioned. At a small town, about thirty miles from London, it was found necessary to have a new gasometer for the supply of the inhabitants. It was accordingly fitted to the works, and filled with hydrogen.

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When this had been done, the person who superintended the works began to entertain a fear that some atmospheric air might be mixed with the coal-gas, and foolishly opened an aperture, and set fire to the gas which issued from it. The flame instantly mounted to the height of many feet, which so much alarmed the superintendent, that he made many attempts to extinguish it, and at last ordered that a piece of soft clay should be placed upon the aperture. His order was unfortunately executed; the flame was driven into the gasometer, and an instantaneous explosion was produced, which shattered the reservoir, blew one man into the air, and injured several others. An accident from the combustion of the mixed gases happened nearer to London, still more recently. From the public accounts it appeared, that from some faulty part of the machinery, there was an escape of gas, which, mixing with the atmosphere of the building in which the gasometer was contained, produced an explosive compound. A candle was incautiously taken into the impure atmosphere, and an explosion instantly followed. The same effect may be produced in a room where gas is burned, but only from the greatest inattention and carelessness. If the gas should be allowed to escape, by turning the stop-cock without applying a light, a room would soon be filled with a deleterious atmosphere of a combustible nature, and the introduction of a flame would be exceedingly dangerous. This is the only accident which can possibly occur from the use of gas, unless we consider the ignition of substances, from actual contact, as another liability; but this attaches to every flame, however it may be produced. We are, therefore, fully justified in stating, that the gas-light is safer as a means of illumination, than any other kind of combustion.

The cleanliness of gas-lighting is another circumstance very favourable to its general application. If the gas be well purified from the adventitious ingredients it contains when first formed, it may be burned years in the same room, without in the least discolouring the articles in it, or even the ceiling. We know a medical gentleman who has burned gas in his bedroom for the last four years, and it is of so pure a quality, that there is no perceptible difference between that part of the ceiling immediately above the light, and other places. When gas, after being burned for a short time, leaves a black stain upon the ceiling, the consumer has good cause of complaint. The cheapness of gas-lighting is another excellent reason for its common adoption, and it has many advantages recommending its use in streets and other exposed places.

There is also an advantage obtained from the use of gas, in the greater intensity of its light than that of any other artificial means of illumination. Several methods of estimating the degree of intensity possessed by different luminous bodies have been invented. There are two circumstances which govern the intensity of light, the distance, and the number and illuminating power of the rays.

The intensity is in the first place inversely as the square of the distance. If a board one foot square be illuminated by a candle at the distance of a yard, four feet square will be lighted at the distance of two yards; and at the distance of three yards, nine feet square. Hence, it will appear, that the same rays of light are successively diffused over a larger surface, the surface illuminated being according to the square of the distance. Now, it is quite evident, that if this be true, the intensity will be inversely as the square of the distance, for as the distance increases, the rays are thrown over a larger surface, according to the same law. This may be proved approximately in any place where there is a luminous body. As we recede from the candle, lamp, or gas-light, the intensity decreases most rapidly; and although we might see to read the smallest type when close to the light, a large print could not be read at eight or ten feet distance.

The intensity of light given out by any substance during combustion, compared with that obtained from some other substance, must also depend on the proportional number and intensity of the rays, and the area of the illuminated surface. A gas-light gives out a much more intense heat than a candle, for this reason; and the fact accounts for one of the advantages derived from its adoption, as a means of obtaining an artificial light.

Various instruments called photometers have been invented, to measure the intensity of light. None of them can lay claim to any degree of exactness, for they are only means by which the sense of sight is assisted. We cannot obtain a contrivance by which to measure the

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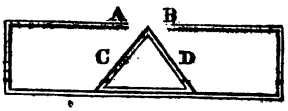
degree of illumination on a scale, in the same manner as we determine temperature. We can only judge of the proportional intensity between one light and another, by the influence they may severally have upon the organ of sight, which, though the most excursive of all the organs of sense, is not able, under any circumstances, to judge of the amount of difference. An illumination which may appear very brilliant, and even oppressive to the eye, if we have been previously in darkness, will appear dull and gloomy, if we observe it after having seen a much more intense light. So, also, under ordinary circumstances, we are unable to judge how much more one surface is illuminated than the other, though the difference between them may be perceptible. To assist the eye in comparing the intensity of light, is all that can be done by a photometer. The only instrument of this sort that we shall mention, is that invented by Professor Ritchie. It consists of a rectangular box, open at both ends, coloured black in the interior, to absorb any light that may be thrown upon it, whether from reflection or otherwise. In the centre of the box two pieces of looking-glass are fixed, at an angle of 45°, as shown at C and D in the figure, which is a sectional view of the instrument, that is the appearance it would present if one of its sides were taken away. At the top of



the box a narrow slit is made, which must be covered with tissue paper. Now, if it were required to examine the difference of intensity between two lights, say for instance a gas-light and a candle, one would be placed at one end of the instrument, and one at the other. The light of each will be reflected, the candle from C, the gas-light from D, on the tissue-paper A B. If they are placed at equal distances, that part illuminated by the gas will be much more intense than that which receives light from the candle. It must, therefore, be removed to a greater distance, until each half of the slit shall appear to be equally illuminated. The relative distances between the two luminaries must then be determined, and by the law already stated, that the diminution of light is as the square of the distances, it will be easy to calculate the variation of intensity between the light of the candle and that of the gas.

To appreciate the advantages which have been derived from the use of coal-gas, it is only necessary to go into any town where the streets are lighted with oil. The dismal appearance these places present, and the facility thus offered to crime, were common to all our cities previous to the year 1810. From the accounts which are given of the introduction of coal-gas, as a means of illuminating our streets and houses, it appears that Mr. Winsor has a claim to the honour, though Dr. Clayton was the first to discover that the gas given off from coal, when heated, produced an excellent flame, suited as an artificial light. "I got some coal-gas," he says in his communication to the Royal Society in 1739, "and distilled it in a retort, in an open fire. At first there came over only phlegm, afterwards a black oil, and then likewise a spirit arose, which I could no ways condense; but it forced my lute or broke my glasses. Once when it had forced my lute, coming close thereto, in order to try to repair it, I observed that the spirit which issued from it caught fire at the flame of the candle, and continued burning with violence as it issued out in a stream, which I blew out and lighted again alternately, for several times. I then had a mind to try if I could save any of this spirit, in order to which I took a turbinated receiver, and putting a candle to the pipe of the receiver whilst the spirit arose, I observed that it catched flame, and continued burning at the end of the pipe, though you could not discern what fed the flame. I then blew it out and lighted it again, several times; after which I fixed a bladder, squeezed and void of air, to the pipe of the receiver. The oil and phlegm descended into the receiver; but the spirit, still ascending, blew up the bladder. I then filled a good many bladders therewith, and might have filled an inconceivable number more, for the spirit continued to rise for several hours, and filled the bladders almost as fast as a man could have blown them with his mouth; and yet the quantity of coal distilled was inconsiderable. I kept this spirit in the bladders a considerable time, and endeavoured several ways to condense it, but in vain. And when I had a mind to

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divert strangers or friends, I have frequently taken one of the bladders, and pricking a hole therein with a pin, and compressing gently the bladder near the flame of the candle till it once took fire, it would then continue flaming till all the spirit was compressed out of the bladder; which was the more surprising, because no one could discern any difference between these bladders and those which are filled with common air."

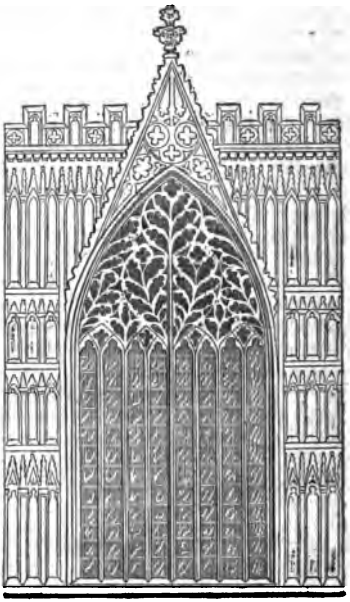
When coal is burning in a common fire, a flame is produced. This flame arises from the combustion of coal-gas and other vapours set free, in consequence of the heat to which the solid body is subjected. There is a very simple means by which the gas may be formed, and its properties discovered. Take a large tobacco-pipe, and put a piece of good coal into the bowl, and enclose it with some substance which will resist the heat. Then fix it in the hottest part of the fire, allowing the end of the tube to come into the room. After a few minutes, a vapour will be seen to issue from it; and when this has been going on sufficiently long to expel the atmospheric air, apply a lighted paper, and the gas will ignite. In this way the reader may manufacture gas for himself, though it is of a very impure kind, as will appear from some statements to be made in our next paper.

GOTHIC ARCHITECTURE.

THE SECOND PERIOD OF GOTHIC ARCHITECTURE.

(Concluded from page 5.)

The second period of Gothic architecture commenced in the reign of Edward I., at the beginning of the fourteenth century, and continued till the close of that century, in the reign of Richard II. The style of this period is peculiarly characterised by the form of its large windows, the pointed arches being divided by mullions, and the tracery thrown in graceful curves, forming circles and other curvilinear figures. In this style, as well as that already considered, there is a great difference of character between different specimens, those formed at the commencement of the age being much less decorated than those of a later date. The mullions were at first thin columns with caps and bases; and the head of the arch was divided into regular figures, such as circles and triangles. This comparative stiffness of form soon gave way to more easy and flowing lines and foliations. The architecture of the second period may be examined in almost any of our cathedrals, but there is not one in which it is used throughout. The reader may form some idea of the richness and beauty of the style from the following view of the great west window of York Minster.



York Minster, drawing of West Window.

The buttresses are singularly various, for they sometimes gradually diminish in height, and sometimes are of the same size throughout; sometimes they finish under the cornice, and at other times are carried through, and surmounted by pinnacles, the face being ornamented with panels and niches. The pinnacles are generally square, and ornamented with crochets and finials. The parapets are pierced or embattled; the spires, where introduced, and that is chiefly in small works, are similar to those of the former period, but more enriched. The interior of Exeter Cathedral, the nave of York Minster, and Beverley Minster, may be studied as offering the most beautiful specimens of the architecture of the period.

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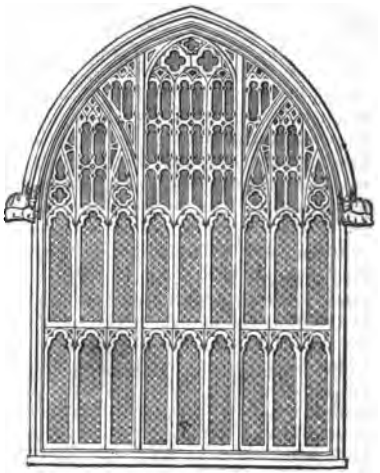
The form of the arch, as we have already stated, cannot always be depended on as a criterion of the period in which the work was executed; but if there be one form of arch more characteristic than another, it is that which is formed upon an equilateral triangle. During the reign of Edward III., this arch was almost universally adopted.

THE THIRD PERIOD OF GOTHIC ARCHITECTURE.

The third period of Gothic architecture commenced at the close of the fourteenth century, in the reign of Richard II. The style introduced and employed at this time is commonly called the Florid Gothic; but Mr. Rickman proposes to give it the name of Perpendicular English, for he says, "The mullions of the windows and the ornamented panellings run in perpendicular lines, and form a complete distinction from the last style." But it is properly objected by Mr. Britton, that the term perpendicular "gives no idea of the increased expansion of the windows, nor of the gorgeous fan-like tracery of the vaultings, nor of the heraldic description of the enrichments which peculiarly distinguish this period; neither does it convey any information of the horizontal lines of the door-ways, nor of the embattled transoms of the windows, nor of the vast pendents that constitute such important features in the third division." It is quite obvious that the age of a building, that is to say the period to which it belongs, cannot possibly be determined from the examination of any one part of the edifice. The mere circumstance of a window with mullions and ornamental panellings in perpendicular lines being found in any elevation, does not fix the age of the building. It is necessary to observe whether the other characteristics of the style are to be found in the same work. To these we must for a moment direct the attention of the reader.

The arch of the third period is generally formed by the segments of ellipses, and is consequently struck from four centres; but there are others whose sides are similar segments of a circle, and struck from two centres. We have a beautiful example of an arch formed from four centres, two being below the base, in the drawing annexed. The doors, whatever the form of the arched head, are inscribed in a square frame with spandrils. The ribs of groined ceilings are profusely decorated with



Window of Westminster Abbey.

rich tracery. The style is generally distinguished by the variety and exuberance of its ornaments, foliate and heraldic. Bath Abbey is an example, but not so well executed as many other buildings; the west fronts of Chester, Winchester, and Gloucester Cathedrals may be studied as fine illustrations of the style. The front of Westminster Hall, Beverley Minster, the chapels of St. George at Windsor, of Henry VII. at Westminster, and King's College, Cambridge, are the most classical examples in the country.

ORIGIN OF GOTHIC ARCHITECTURE.

There are few subjects as to which learned men have differed so much in opinion, or have maintained their opinions with so much tenacity, as the origin of Gothic architecture. These examples of learned trifling, says an excellent writer, exhibit various objects to which the cuspid arch can be likened, up to the keel of Noah's ark; and the difficulty is, not to form an opinion of the possible origin of the pointed arch, and of the species of building to which it appertains, but to select that which appears most probable.

Sir Christopher Wren, and other writers, who, like him, could see no beauty in any style that was not founded upon the principles of Grecian and Roman architecture, supposed the Gothic to be an invention of the Saracens, and that it was brought into Europe by the first crusaders, or introduced into Spain

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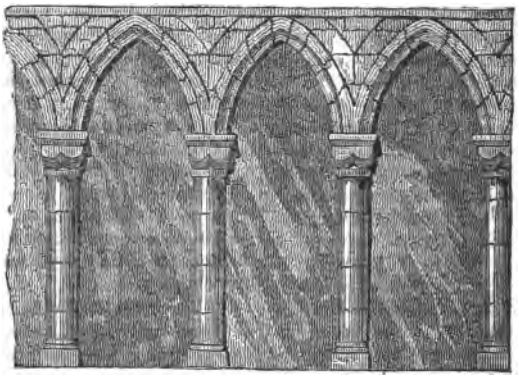
by the Moors: this opinion has some show of truth, but will not bear investigation. It is true that pointed arches have been found in eastern countries, but they differ from the Gothic arch in being narrower at the foot of the arch than a little above it. The Moorish arch is never introduced in our ecclesiastical structures; a circumstance that cannot be accounted for, if the Gothic arch was invented in, and brought from the east. In the chapel or tomb of the virgin at Jerusalem, there is a pointed arch springing from columns. This edifice is supposed to have been erected in the time of Constantine; but to say nothing of the doubtfulness of this opinion, there is every reason to believe that the arch was erected after the building itself. There is also the evidence that arches found in other parts of Syria were constructed by Europeans during the period they were in possession of the country.

Dr. Milner supposes that the idea of a pointed arch was derived from the intersection of two semicircular arches. In the Norman style, we have many examples of intersecting circular arches, and there is nothing improbable in this theory. Many of the inventions most important to the age have been derived from some accidental disposition of forms; and it does not seem singular that the appearance presented in the Norman structures, should have led a student or an accidental observer to the discovery of the pointed arch; from which we may trace all the other peculiarities of the style.

The form of the arch, in all the early specimens of Gothic architecture, is, as may be seen by the following drawing, the same as that produced by the intersection of two semi-circles.

Sir James Hall proposes another theory to account for the discovery of the



Arches, Romsey Church, Hampshire.

pointed arch, which may be mentioned as showing how far men will sacrifice probability to please their fancies. "This theory is founded on the probable practice of a people, who, like our Saxon ancestors, formed the walls of their dwellings by interweaving the small branches of trees with upright posts in the manner of basket-work; and who may be supposed to have constructed their religious edifices in the same manner, but with greater taste." Sir James thinks, "they would plant a number of posts or trunks of trees, in vertical positions, and in two parallel rows, at certain distances from each other, so as to form on the plan a series of squares, or rectangular parallelograms, and together constituting one great rectangular avenue. Surrounding each of these, they might also plant vertically a certain number, he supposes eight, of long slender branches of a flexible wood, which, being bound to the principal posts at bottom, and in some part of their length, would cause it to resemble what is called a clustered column with its base and capital. The upper parts of the branches being bent till they met over the middle of the interval between the posts to which they are attached, would form the outline of a groined vault, with an arcade on each side; and these arches might be either semicircular or pointed, according to the manner in which the branches were bent; lastly, a pole run-

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ning down the length of the avenue, and joining the vertices of all the arches which cross the avenue, will represent the ridge of the vault." Let it be supposed that all these effects were produced by the disposition imagined to exist, and that they were seen by the curious eye of some close observer, can we then admit Sir James Hall's theory? Are we to suppose a people after admiring such a sight, to rise from that low state of civilization in which the trees of the forest are their only canopy, to the condition of knowledge which that people must have enjoyed, who erected the noble Gothic edifices, which are now among the finest productions of art? The supposition cannot be maintained, and the theory cannot be expected to have many supporters.

We need not dwell upon the many other suppositions with which the ingenious have pleased their fancy, for they have little practical use, and as little probability to recommend them to notice. The style has been practised in this and in other European countries with great success for many centuries; but as to the inventor, the thought or appearance which first suggested it, and the country in which it was first adopted, we are likely to continue in the dark, unless some records should be made known with which antiquaries are at present unacquainted.

GENERAL REMARKS.

Gothic architecture has been chiefly employed in ecclesiastical structures, for which it is admirably adapted. Our forefathers, who, it is evident, had more of the form than of the spirit of Christianity, erected large and sumptuous buildings professedly for the worship of God. How much they were made to pamper the pride, and to destroy the spirituality of religious worship, history attests. In too many instances they were erected with the price of blood; and man assumed the Divine right of Jehovah, in pronouncing the pardon of sin, in order to add to the decorations of these noble structures. It is the consolation of the true believer, that the worship of God is at all times and in all places acceptable, when it proceeds from love to Christ and a humble sense of sin. How beautiful soever the cathedrals of our native land may be, yet the hearth of the cottager, where the heart is opened in daily supplication to the God of all grace, is not less the dwelling of Him, whose abode is in the humble and contrite heart. There is much to admire in the construction of our ecclesiastical edifices, much to distress in the recollection of the means by which they were erected by our Roman Catholic ancestors, and much need of care, lest the outward form of worship should be substituted for the inward feeling. But there is a temple, not made with hands, which God has prepared for those who love him, where, freed from all the infirmities of sense, their worship shall be pure, and their happiness complete. H.

REMEMBERED KINDNESS.

Some years ago, a young tradesman having incautiously given the cash for a bill of considerable amount, just before he began business, found himself awkwardly situated; for the bill was a bad one, and soon after it was returned. By this transaction he lost almost all his ready money, at the precise time when he most needed it; to such straits was he driven, that he was arrested three times in one day. The last time he felt very dispirited; it seemed as if all his exertions were useless; a prison and ruin stared him in the face. In this dilemma he was accosted by a kind-hearted friend whom he knew. She inquired what had happened to make him look so miserable. He told her that he was "quite cut up," for that he was arrested for fifteen pounds, when he had but five pounds and half a guinea in the world.

"Oh, never mind," said she, "we are doing pretty well, sit down with the officer, and give him a glass of ale, while I run and fetch you the ten pounds you want."

Away she ran, and in a short time returned with the money, thus extricating the young tradesman from his difficulty.

The sudden changes of this uncertain world often raise up one, and pull down another, when least expected. In a little time after, the kind-hearted woman lost her husband, who died leaving her very poorly provided for; but the ready assistance she had given to the young tradesman had secured her a friend, who never became unmindful of the service she had rendered him.

"Had it not been for that ten pounds," said he, "I might have been ruined for ever; for had I been cast into prison at

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that time, there would have been little prospect of my holding up my head after."

The tradesman abundantly prospered, and the poor widow and her daughter are at this present time living rent free in a house which is his property, receiving those attentions which are as creditable to his gratitude and liberality, as they are grateful to those to whom they are manifested.

In a world wherein acts of kindness on the one hand, and a grateful remembrance of them on the other, are not always to be met with, it is well to record such instances of them, as fall within our knowledge and observation.

"The liberal soul shall be made fat: and he that watereth shall be watered also himself."

POTTAGE.

"Feed me, I pray thee, with that same red pottage." Gen. xxv. 30.

The people of the east are exceedingly fond of pottage, which they call *kool*. It is something like gruel, and is made of various kinds of grain, which are first beaten in a mortar. The red pottage is made of *kurakan*, and other grains, but is not superior to the other. For such a contemptible mess then did Esau sell his birthright.

When a man has sold his fields or gardens for an insignificant sum, the people say, "The fellow has sold his land for pottage." Does a father give his daughter in marriage to a low caste man, it is observed, "He has given her for pottage." Does a person by base means seek for some paltry enjoyment, it is said, "For one leaf" (namely, leaf-ful) "of pottage he will do nine days' work." Has a learned man stooped to any thing which was not expected from him, it is said, "The learned one has fallen into the pottage-pot." Has he given instruction or advice to others, "The lizard which gave warning to the people, has fallen into the pottage-pot." Of a man in great poverty, it is remarked, "Alas! he cannot get pottage!" A beggar asks, "Sir, will you give me a little pottage?" Does a man seek to acquire great things by small means, "He is trying to procure rubies by pottage." When a person greatly flatters another, it is common to say, "He praises him only for his pottage." Does a king greatly oppress his subjects, it is said, "He only governs for the pottage." Has an individual lost much money by trade, "The speculation has broken his pottage-pot." Does a rich man threaten to ruin a poor man, the latter will ask, "Will the lightning strike my pottage-pot?"—*Roberts' Oriental Illustrations.*

CAPACITY OF THE STOMACHS OF SERPENTS.

No fact is more satisfactorily established in natural history, than that serpents, of all the known species, gorge masses of food greatly larger in diameter than any part of their own bodies. But that which we are about to relate, though familiar to people of some of the states of America, does not appear to have been mentioned generally in the books. Serpents prey upon each other; and one of a highly venomous character swallows another equally so, though of a different variety, and yet suffers nothing from the effects of the poison thus taken into the stomach, which would have been fatal had the smallest portion of it been inserted in the wounded skin. A rattlesnake will seize the moccasin snake, and has been repeatedly seen to do it, and entirely swallow it; and yet the latter is dreadfully poisonous. But the strangest part of the whole is this; the moccasin snake is nearly two feet the longest, and maintains that proportion from the day they leave the egg till they are perfectly grown, so that a rattlesnake of four and a half feet, takes a moccasin snake not far from six feet long completely into its dilatable stomach.—*Scientific Tracts.*

THE SACRED WRITERS.

Not a single expression can be found in any of the sacred books which constitute the canon of the Scripture, to the prejudice of God's glory. No impious metaphor, no hyperbole tending to blasphemy, nor any unbecoming comparison of man with God, is there to be found. The language is humble, modest, religious. It is really surprising that, though other authors can hardly write a few pages without injuring the glory of God, this long series of holy teachers discover, in all their words and ideas, that respect which is due to the Supreme Being. This, as all must confess, is one of those internal characters by which the Bible is known to be the book of God.—*Abbadie.*

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ARCHIBALD IRONY, ON SWEARING.

"Soldier, so tender of thy prince's fame,
Why make so free with a superior name,
For thy King's sake the brunt of battles bear,
But for the King of king's sake never swear?"

In going through the world, every one ought to turn his talents to the best advantage. All have some kind of talent, though very few possess that of irony in the same degree in which I am endowed with it.

The stream that runs murmuring among the meadows is pleasant to look upon, but it may be made useful as well as pleasant. It may be made to turn a mill-wheel, and to fertilize the soil, as well as to adorn the spots through which it passes. In like manner, the running stream of my ironical remarks is made useful. If I meet a man with a hump on the shoulder, an impediment in his speech, or affected with St. Vitus's dance, I would rather make my teeth meet together in the middle of my tongue than utter a syllable that could inflict pain; for it is a contemptible mind that can make the infirmities of others a source of pleasure; but if I fall in with any one, young or old, who plumes himself on his vices, my tongue directly begins to play the scorpion. A watchman's rattle cannot go faster; it is then that I try to turn my talent to advantage.

Some time ago I happened to fall in with two pleasant companions, a poet and a painter, who were neither deficient in genius, education, nor gentlemanly qualities, but they both had acquired the bad habit of swearing to such a degree that every alternate sentence was garnished with an oath.

Now I abhor swearing, and this being a case of an aggravated kind, I was determined to reprove them in my own way.

We have different modes of doing things, and mine may be a little odd, but perhaps none the worse on that account. If you hear a man swear, and you gravely rebuke him, he will, most likely, look serious, own that it is a bad habit which he cannot help, stick his tongue in one of his cheeks, wink his eye at a friend, and annoy you with a volley of additional oaths, just to turn the laugh against you; but if you take another course, if you pay him an ironical compliment on his skill in swearing, he looks foolish, and knows not what to make of it. Once hearing a young man swear terribly, I stepped up to him, and asked at what college he had been educated? He replied, "At no college, sir." "No!" said I, "why, you swear so capitally, that one might almost suppose there had been established a college somewhere hereabout to teach young men to swear." He slunk away, apparently as much ashamed of himself as if he had been caught in robbing a hen's nest. But you shall hear how I managed with the poet and the painter, in my parting address to them.

Irony is a sharp instrument, but it may be made very useful;

E'en like the razor's polish'd edge,
By skilful hands alone
It should be used; it deeply wounds;
It cuts right to the bone.'

"My good friends," said I, with a grave countenance, "I hardly know how to speak of your good qualities. I think nothing of your common-place qualifications, you are talented, friendly, and agreeable; but that which has made the deepest impression on my mind is your capital swearing."

Here they looked at each other, not knowing whether to be angry or pleased, but I went on.

"I am sure that all I can say will fall very short of what I ought to say, and therefore you must not judge by the poverty of my language, of the estimation in which I hold a talent that I can never hope myself to attain. What a keen satisfaction must an exalted mind feel in swearing nobly, and in imparting to others so high, so useful, and so ennobling a qualification!

My two friends looked as chapfallen as two sheepstealers; but I had no pity on them at all. My tongue was set a-going, and I might as well have tried to arrest the progress of a water-mill wheel, as to stop the current of my remarks.

"You know, sir," said I, addressing myself to the poet, "that many men have the genius to write an epic poem to call forth the passions,

'And swell the soul to rage, or kindle soft desire.'

Homer, Virgil, Dryden, Milton, and fifty others could do this." "You know, my good sir," said I, turning to the painter, "that many artists have the ability to execute a picture which may almost be mistaken for reality, and to paint full length figures, that seem nearly ready to advance from the canvas to shake hands with you. Hogarth,

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Rubens, Raffaelle, Claude, Poussin, and a hundred others, have obtained distinction; but to swear well requires abilities of a very different order. Indeed, such abilities, that I have often wondered how any man could excel in such an attainment. Must it not have been, gentlemen, the effect of a wondrous effort, even to yourselves, to have made such progress, and to have secured to yourselves such an amazing advantage! Swearing is forbidden by the word of God, and, therefore, the practice of it shows that a man scorns to be dictated to even by his Maker!

"I need not dwell a moment on the morality of swearing, nor expatiate on the standing it gives a man in society! How much it extends his reputation, and increases the reliance placed on his judgment and integrity.

"Being a stranger to the habit of swearing, I cannot judge of the consolations it may impart in seasons of trial and adversity; they surely must be of a peculiar kind. You best know how frequently your heavy hearts have been lightened, and your darkened hopes lighted up with the consciousness of being excellent swearers!"

I really thought the poet and the painter would here have taken themselves off both together.

"Have you never observed, my friends, what a softening, soothing, civilizing influence swearing diffuses over the mind? Have you never witnessed its amiable influences in pot-houses, dram-shops, prisons, and other places, and remarked how invariably the swearer rises, not only in his own respect, but in the respect of others!

"Do you not consider swearing to be a proof of true courage? When a man whom you have offended calmly says, 'Be assured we meet again, sir,' you may call in question his intention of ever again seeing you; but when a fellow with a loud voice swears a threat with some blasphemous expression, who can doubt for a moment that he is a man of true courage, and that being made up of bravery, he will execute the threat he has made! Are you not convinced that this is the case, gentlemen?

"Some people have suggested that when a man swears it is an acknowledgment on his part that he is more deficient in language than others, and cannot therefore express himself without swearing; but is not this an absurd opinion? And is it not much more rational to consider swearing as a proof of an amiable humility in a man, who having wit and proper words at his command, neglects both, lest he should be thought assuming a superiority over the person with whom he converses? Do you not think, gentlemen, that you could hit upon some measure whereby the influence of swearing might be extended, and would not such an attempt entitle you to the deserved approbation of all around you, and the smiles of an approving conscience? If the practice of swearing affords you so much solid enjoyment in life, do you not think it will yield you still greater satisfaction in the hour of death?"

I know not how much longer I should have kept my two acquaintances on the rack, had they not appealed to my compassion so forcibly by their apparent distress; but as it was, I absolutely pitied them. If you have ever seen the woebegone face of a man who had been dragged through a horse-pond for some unlucky prank he had been playing, you may imagine the fallen countenances of the poet and painter, while enduring the stinging venom of my scorpion tongue. Since then, in all my wanderings, I have never again met with them; but, judging from their parting glance, though they may fall into a thousand follies, I think they will never plume themselves again upon the accomplishment of swearing.

ARCHIBALD IRONY.

NATURAL AND REVEALED RELIGION.

"Fœde hunc mundum intravi, anxius vixi, perturbatus egredior: Causa causarum, miserere mei."

"I was born polluted, I have spent my life anxiously, I die with trembling solicitude: O, thou Cause of causes, have pity on me."—*Aristotle.*

The dying language of a great heathen philosopher, which I have quoted, appears to me to be no mean argument against infidelity.

Natural theology was the only theology with which Aristotle was acquainted, and this taught him the existence of a Supreme Ruler. It is scarcely possible to conceive a more correct description of Deity than the words he uses; they comprise in themselves a direct contradiction of the vain ideas entertained by many with regard to God's particular provi-

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dence. Modern infidels (and I fear many who would be shocked at the application of this title to them) refer us to the laws of nature; Aristotle to the Originator and Executor of those laws. Modern infidels seem to think that natural causes will account for every thing! the heathen philosopher perceived the necessity of One who presided in the great executive; modern infidels refer us to second causes, he to the Cause of those second causes.

From these words, it is evident that the aid of Divine revelation was needed to clear up the doubts and difficulties which an investigation of nature's wonder had given rise to. The man looked at himself, and thought of his Creator; he looked at the world, and thought of its Creator; his reason taught him that one God had made him and it, and that this God was infinite; and the result of these reflections was a proper conception of himself. He perceived that he was born polluted and naturally sinful; he found that the steps he had trod through life had been marked by sorrow and vice: he lay on the bed of death, while pain racked his agonized frame; before him stretched a boundless uncertainty; he could not have been formed for nothing, and therefore he was convinced that something was to come: to that doubtful something he anxiously looked forward, and into the hands of his Creator committed his dubious destiny.

Any one who will compare the death of this noted investigator of nature, with the calm and resigned falling asleep of the Christian, will readily perceive the superiority of revealed over natural religion. In this instance, nature did all she could; she taught the individual that from beginning to end he was a child of sin and sorrow, and that he was in the hands of an omnipotent Governor; but there she left him; she carried him into regions of mystery, and left him enveloped in darkness; she shrouded him in the thick clouds of uncertainty, but failed to dart through them one single ray of light. When, however, revelation is called in, when an appeal is made from the works to the word of Jehovah, we find a sun arise able to dissipate the thickest gloom, and illuminate the grossest darkness; the clouds that veiled the mercy-seat are in a moment scattered to the winds, and we set before us our great King, though enveloped in mystery and wonder, still sitting between the cherubim; and as our intellects are gladdened by this soul-cheering sight, we hear a voice exclaiming, "Clouds and darkness are round about him; but justice and mercy are the habitation of his seat."

But this is not all; revelation not only tells us that our God is love, it carries us to mount Calvary, and there shows us the mysterious infinity of that love; it bears us to the foot of the cross, and there directs us to throw off our burden of soul-oppressing sin, and walk forth in the freedom which Christ has procured for us by his blood.

To this brief comparison of nature with revelation, it will not be inappropriate to add a remark or two upon the connexion between them. It is not my intention now to attempt to prove, though I know it some day will be proved, that they do not in any instance differ, but I would rather convey some idea of the immense importance of their being analogous. They are both descriptions of the same God; they are both productions of the same infinite mind, and the only distinction between them is, that one speaks by words, and the other by works. But the natural fruit of this distinction is, that the one which speaks by words is plainest and greatly to be preferred; inference, the only language of works, being at best dubious, while the clear statements of Scripture contain nothing doubtful. There are also many of the workings of Deity necessary for man's happiness, a knowledge of which inference could never convey; and therefore in the verbal revelation we expect to find many things which nature could never teach. We have no right, therefore, to expect to find them the same in measure or extent; but we have a right to expect that they shall never contradict each other; and, without a doubt, when the light of science and literature, aided by Divine inspiration, shall have opened to our view all the wonders of the natural world, every difficulty will be removed, and all will be ready to confess, with one mouth, the Author of nature and revelation to be one.

But it would be very improper to stop here without adding a caution extremely necessary, with regard to the present appearance of things; though it is absolutely necessary that between these two illustrations of Deity there should be no opposition, yet it is very possible, nay it is certain, that in many cases, man's

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finite knowledge cannot comprehend the connexion. The eye of faith, therefore, must look up to the Saviour, to him refer all doubts and difficulties, and patiently wait till that time shall come when it shall no longer see through a glass darkly. We must not expect to have this wondrous volume completely disclosed by mortal efforts, but consent to wait God's good pleasure, who will, at his appointed season, remove all the clouds and darkness, in which he has been pleased to envelop his Divine Majesty, and explain to every believer in Christ, how, though his pathways were in the sea, his footsteps in the great waters, and his judgment unknown, yet that in all his dispensations God was love. H. L.

A HURRICANE IN THE SOUTH SEAS.

We were spending a few days with Mr. Pitman, revising our translations, when, early on Saturday morning, 21st of December, I received a note from Mr. Buzacott, informing me that a very heavy sea was rolling into the harbour; and that although there was no immediate danger, yet if it increased, of which there was every probability, the vessel must sustain injury. I set off immediately for Avarua, and on my arrival was alarmed and distressed at the threatening appearance of the atmosphere, and the agitated state of the ocean. I instantly employed a number of natives to carry stones, and raise a kind of breakwater around the vessel. One end of the chain-cable was then fastened to the ship, and the other attached to the main post of our large school-house, which stood upon a bank, ten feet high, about forty or fifty yards from the sea; and having removed all the timber and ship's stores to what we supposed a place of safety, and taken every precaution to secure my ship and property from the destructive effects of the coming tempest, I returned to Ngatangiia, fatigued and distressed. As I was leaving Avarua, I turned round to take, as I feared, a last look at the little vessel, when I saw a heavy sea roll in, and lift her several feet: she however fell very gently to her place again. The next day was the Sabbath, and it was one of gloom and distress. The wind blew most furiously, and the rain descended in torrents, from morning until night. We held, however our religious services as usual. Towards evening the storm increased; trees were rent, and houses began to fall. Among the latter was a large shed, formerly used as a temporary school-house, which buried my best boat in its ruins. We had waited with great anxiety during the day to hear from Mr. Buzacott, and as no information had arrived, we entertained a hope that the sea had subsided. But, instead of that, about nine o'clock, a note came to apprise me that it had risen to a most alarming height; that the vessel had been thumping on the stones the whole of the day, and that, at six o'clock, the roof that covered her was blown down and washed away. To complete the evil tidings, the messenger told us that the sea had gone over the bank, and reached the school-house, which contained the rigging, copper, and stores of our vessel, and that if it continued to increase, the whole settlement would be endangered.

As the distance was eight miles, the night terrifically dark and dismal, and the rain pouring down like a deluge, I determined to wait till the morning. We spent a sleepless night, during which the howling of the tempest, the hollow roar of the billows as they burst upon the reef, the shouting of the natives, the falling of the houses, together with the writhing and creaking of our own dwelling under the violence of the storm, were sufficient, not merely to deprive us of sleep, but sufficient to strike terror into the stoutest heart.

Before daylight on the Monday morning, I set off for Avarua, and in order to avoid walking knee-deep in water nearly all the way, and to escape the falling limbs of trees, which were being torn with violence from their trunks, I attempted to take the seaside path, but the wind and rain were so violent that I found it impossible to make any progress; I was therefore obliged to take the inland road, and by watching my opportunity, and running between the falling trees, I escaped without injury. When about half-way, I was met by some of my own workmen, who were coming to inform me of the fearful devastation going on at the settlement. "The sea," they said, "had risen to a great height, and had swept away the storehouse and all its contents; the vessel was driven in against the bank, upon which she was lifted with

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every wave, and fell off again when it receded!" After a trying walk, thoroughly drenched, cold, and exhausted, I reached the settlement, which presented a scene of fearful desolation, the very sight of which filled me with dismay. I supposed, indeed, that much damage had been done, but I little expected to behold the beautiful settlement, with its luxuriant groves, its broad pathways, and neat white cottages, one mass of ruins, among which scarcely a house or tree was standing. The poor women were running about with their children, wildly looking for a place of safety, and the men were dragging their little property from beneath the ruins of their prostrate houses. The screams of the former, and the shouts of the latter, together with the roaring sea, the pelting rain, the howling wind, the falling trees, and the infuriated appearance of the atmosphere, presented a spectacle the most sublime and terrible, which made us stand, and tremble, and adore. On reaching the chapel, I was rejoiced to see it standing; but as we were passing, a resistless gust burst in the east end, and proved the premonitory signal of its destruction. The new school house was lying in ruins by its side. Mr. Buzacott's excellent dwelling, which stood upon a stone foundation, was rent and unroofed. The inmates had fled, and the few natives who could attend were busily employed in removing the goods to a place of safety. Shortly after my arrival, a heavy sea burst in with devastating vengeance, and tore away the foundation of the chapel, which fell with a frightful crash. The same mighty wave rolled on in its destructive course, till it dashed against Mr. Buzacott's house, already mutilated with the storm, and laid it prostrate with the ground. The chief's wife came and conducted Mrs. Buzacott to her habitation, which was then standing, but shortly after they had reached it, the sea began to dash against it, and the wind tore off the roof, so that our poor fugitive sister, and her three little children, were obliged to take refuge in the mountains. Accompanied by two or three faithful females, among whom was the chief's wife, they waded nearly a mile through water, which in some places was several feet deep. On reaching the side of the hill, where they expected a temporary shelter, they had the severe mortification of finding that a huge tree had fallen upon and crushed the hut. Again they pursued their watery way in search of a covert from the storm, and at length reached a hut, which was crowded with women and children who had taken refuge in it. They were, however, gladly welcomed, and every possible assistance was rendered to alleviate their distress.* Mr. Buzacott and myself had retired to a small house belonging to his servants, which we had endeavoured to secure with ropes, and into which all our books and property had been conveyed. One wave, however, had dashed against it; we therefore sent off a box or two of books and clothes to the mountains, and waited with trembling anxiety to know what would become of us. The rain was still descending in deluging torrents, the angry lightning was darting its fiery streams among the dense black clouds, which shrouded us in their gloom, the thunder, deep and loud, rolled and pealed through the heavens, and the whole island trembled to its very centre, as the infuriated billows burst upon its shores. The crisis had arrived: this was the hour of our greatest anxiety; but "man's extremity is God's opportunity:" and never was the sentiment expressed in this beautiful sentence more signally illustrated than at this moment; for the wind shifted suddenly a few points to the west, which was a signal to the sea to cease its ravages, and retire within its wonted limits; the storm was hushed, the lowering clouds began to disperse, and the sun, as a prisoner, bursting forth from his dark dungeon, smiled upon us from above, and told us that "God had not forgotten to be gracious." We now ventured to creep out of our hiding-places, and were appalled at beholding the fearful desolation that was spread around us. As soon as possible, I sent a messenger to obtain some information respecting my poor vessel, expecting that she had been shivered into a thousand pieces; but, to our astonishment, he returned with the intelligence, that although the bank, the school-house, and the vessel were all washed away together, the latter had been carried over a swamp, and lodged amongst a grove of large chestnut trees, several hundred

* As soon as Mr. Buzacott heard that Mrs. Buzacott and the children had been compelled to leave the chief's house, he went in search of them; and, after experiencing considerable anxiety on their account, was truly grateful to find them safely housed.

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yards inland, and yet appeared to have sustained no injury whatever! As soon as practicable, I went myself, and was truly gratified at finding that the report was correct, and that the trees had stopped her wild progress, otherwise she would have been driven several hundred yards farther, and have sunk in a bog.—*Rev. John Williams.*

INFLUENCE OF CHRISTIANITY.

Perhaps no man is acquainted, to the full extent, with the beneficial influence of Christianity on the minds of men in general. And it may be that none of us are aware of the extent of the support given by religion to the virtues of ordinary life, or how much our present comforts are augmented, or our moral and social sentiments fed, from this overflowing fountain. Let but Christianity be banished from the world; let men rid themselves of their belief in a future state of retribution; let them reject the doctrine of a wise and universal Providence; let them believe that their existence is the result of chance, that human life has no purpose, and that there is no Supreme Being concerned in the government of our affairs, who will recompense the virtuous, and punish the guilty; let them believe that an oath is not heard in heaven, that virtue has no unfailing friend, and that they and theirs will perish together in death—then the streams of human happiness would be turned aside by the disorder and desolation which the unruly passions of men would incessantly be introducing. The authority of law would cease, the bonds of society be broken, the harmony and beauty even of the material universe would be unobserved or disregarded, and the society of mankind would soon become as hateful as a den of lions, or a nest of vipers. But Christianity, pure Christianity, sheds a light and a glory on the world which nothing else can impart. Its arrangement is order, its nature love, its object the happiness of man, its influence, life and happiness. It is a display of the wisdom, power, goodness, justice, and truth of God, rendered conspicuous to every capacity, so that "a wayfaring man shall not err." It speaks of the greatest subjects. It instructs us in the character of God, and the duty of man. It is in fact God's own proclamation of himself to his creatures. Its influence in expanding and elevating the mind is also manifest. Thus when a man is made truly acquainted with its vital and renovating principles, he soon manifests powers of mind which are far above what he possessed, or at least exercised previous to that event. And indeed since the mind receives its intellectual as well as moral impressions from the object with which it has intercourse; and since there is in Christianity every thing that is lofty and glorious, or at all adapted to ennoble the human soul, and to dignify and exalt the affections, it would be unreasonable and unjust to deny to it such an influence.

Christianity, by enlarging the power of the mind, has also given considerable accessions to the various branches of human learning. The revival of learning, as it is called, is in a great measure to be attributed to its influence. And though many who make great pretensions to learning have been avowed enemies to it, yet it cannot be denied that most of the best scholars of modern times, were those who were educated, and whose minds received a right direction in schools and colleges of christian institution. Christianity has planted seminaries of learning in every city and town of importance in this country; and to it is due our warm and grateful acknowledgments for the present improved state of society.

Christianity at present, however, is but in its infancy, and our knowledge of it is very limited; "We see through a glass darkly." Eternity alone can unfold to us the full benefits it confers. This moral sun however has appeared in our world, it has arisen above the horizon, it has scattered many of the dense clouds of bigotry, intolerance, and superstition, which long obscured its cheering rays. Gentile wickedness, and pagan idolatry, have been vanquished by its truth and power; and with humble and ardent expectation, we anticipate the time when "the earth shall full of the knowledge of the Lord, as the waters cover the sea."

"Seeing then that we look for such things, what manner of persons ought we to be in all holy conversation and godliness?" Let the world see in us that Christianity is not a mere name, not an empty word, not an idle form, not a mere transient feeling, but something that is real, deep, and permanent; a companion

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through life, a bulwark against sin, a spring of heavenly consolation, a "well of water springing up unto everlasting life." E. W.

THE RAIN.

The elevation of the clouds is occasioned by the expansive agency of heat, by which the water is lifted up from the earth in the form of vapour. Heat combines with water wherever it finds it, and forms a new kind of fluid, which being highly elastic springs forth in every direction. And were there no check put to it, this process of evaporation would go on till every drop of water on the face of the globe had vanished into boundless space. And here is the wonder, not merely that the water is kept aloft, but that it ever descends at all, as its tendency is, when converted into vapour, to flow off perpetually, and never to return to the point from which it started, unless operated upon by some external cause. But an effectual means has been provided to check this tendency, no less simple than admirable. Now the quantity of vapour must depend upon the quantity of heat contained in it, as the effect is always proportioned to its cause, which heat can never be greater than the heat of the atmosphere; for the moment the vapour held in any region becomes warmer than the air around it, the latter begins to draw off the excess of heat, and the vapour which was before ascending in a thin transparent form, falls back in the shape of a cloud, and afterwards, if the heat continues to be withdrawn, descends in drops of rain. Thus through the effect of heat on one hand, the water ascends towards the sky; and through the contrary operation of cold in the atmosphere on the other, it is made to descend, and thus as it were to oscillate like a pendulum, or the balance of a watch, between the two counter agencies of heat and cold.

By the contending effects of heat below and cold above, the vapour is often bound in a cloud, which is more frequently the case with the "thick clouds." While by this beautiful adjustment the vapour is produced while its quantity is limited, an aqueduct, or "water course," Job xxxviii. 25, has been reared by the Almighty Architect, which collects and guides the water to the places of its destination.

Job beautifully remarks, "He bindeth up the waters in his thick clouds; and the cloud is not rent under them," Job xxvi. 8. On this text Charnock says, "God compacts the waters together in clouds, and keeps them by his power in the air against the force of their natural gravity and heaviness, till they are fit to flow down upon the earth, and perform his pleasure in the places for which he designs them. 'The cloud is not rent under them:' the thin air is not split asunder by the weight of the waters contained in the cloud above it. He causes them to distil by drops, and strains them as it were through a thin lawn, for the refreshment of the earth; and suffers them not to fall in the whole lump, with a violent torrent, to waste the industry of man, and bring famine upon the world, by destroying the fruits of the earth. What a wonder would it be to see but one entire drop of water hang itself but one inch above the ground, unless it be a bubble which is preserved by the air enclosed within it! What a wonder would it be to see a gallon of water contained in a thin cobweb as strongly as in a vessel of brass! Greater is the wonder of Divine power in those thin bottles of heaven, as they are called, Job xxxviii. 37, and therefore called his clouds here, as being daily instances of his omnipotence. That the air should sustain those rolling vessels, as it should seem, weightier than itself; that the force of this mass of waters should not break so thin a prison, and hasten to its proper place which is below the air; that they should be daily confined against their natural inclination, and held by so slight a chain; that there should be such a gradual and successive falling of them, as if the air were pierced with holes like a gardener's watering-pot, and not fall in one entire body to drown or drench some parts of the earth—these are hourly miracles of Divine power, as little regarded as clearly visible." L.

REFLECTIONS AFTER A VISIT TO THE COUNTRY.

"The sea is his, and he made it; the earth is the Lord's, and the fulness thereof."

The grandeur of the raging ocean, the tempest in its majesty, the mighty rushing wind in its fury, the clashing of the distant thunder rolling in the skies, waxing loud and louder, which is the voice of the Almighty, echoing

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through the vault of heaven; the vivid lightning flashing from pole to pole, the rain descending from the sable clouds, the elements in wild and terrific commotion, the foaming billows swelling mountains high, the angry waves dashing against the immoveable rocks, the dreary sounds of the sea-fowl;—to see and hear these things, and to form some adequate conception of their magnificence, we must ascend the summit of some towering cliff, by the side of the dark blue ocean. In such a scene we may trace something of the power, wisdom, and greatness of Him who holdeth the waters in the hollow of his hand, who maketh the clouds his chariot, and rides upon the wings of the wind, and to whom all nations are as a drop of a bucket. And here we may gain some faint idea of the awful grandeur of the state of things at the close of ages, when the Lord Jesus shall come with ten thousand saints and angels to judgment; when the elements shall melt with fervent heat, and the earth and the works therein shall be burned up, and the heavens rolled together as a scroll. At this awful crisis what will the impenitent sinner do? It will be in vain for him to call to the rocks and mountains to fall upon him: then the door of mercy will be for ever shut, then the God of mercy will laugh at his calamity, and then he will say, "Behold, ye despisers, and wonder, and perish."

It is only the genuine believer that can contemplate this scene with feelings of delight and tranquillity; he only can behold a beauty and a glory in these things. The man, whose mind is alienated from, and at enmity with God, can see nothing in them but that which produces shame, fear, and trembling, bordering on despair; he only is happy that can trace the finger of God in the storm, in the calm, in the thunder, in the whirlwind, in the soft zephyrs, and in all things above him, around him, and beneath him. Happy, thrice happy is he who can, in all places, and at all times, and under all circumstances, look up to the first Cause of all things, and by the influence of the Holy Spirit unfeignedly say, "My God, and my Saviour, thou art my Father and portion, for time and eternity, I am thine, and thou art mine.

How beautiful to see the sun sinking beneath the western ocean, leaving its glory in the cloudless sky to rise more glorious the succeeding day; to see the moon ascending from the bosom of the sea, and marching through the heavens in stately majesty; to see around on either hand the woods and the mountains, when a perfect stillness pervades all the works of nature, except the rustling of the leaves, by the soft and gentle breeze, or the bleating of the sheep as they are feeding in the surrounding plains and hills, or the sound of the cock crowing, or the dog barking, or perchance some night songster, or the screech-owl's doleful cry. How beautiful to see the morning sun rising over yonder mountains, to enliven the beauties of nature; to see the cattle feeding upon a thousand hills, in various herds; to see and hear the sky-lark mounting toward the ethereal light, warbling her song of praise; to hear the labourer as he walks over the fields chanting his rustic song; to smell the violet or the woodbine and the various sweet flowers of different scents perfuming the air, while the morning dew is still on them; to see the pastures clothed with flocks, and the valleys covered and waving with corn. In such scenes the Christian may forget the world and its vanities, and hold communion with his God and Father; he may realize a foretaste of those joys and pleasures which are at his right hand; where all the pilgrims of Christ will rest in due season, where they will neither hunger nor thirst any more, where there is no night, no need of the sun, and where there is no sin, no pain, no death, and where God shall wipe away all tears from all eyes, and everlasting joy shall be upon the heads of all the redeemed.

There pain and sickness never come,
And grief no more complains;
Health triumphs in immortal bloom,
And endless pleasure reigns.

No cloud those blissful regions know,
Nor sun's faint sickly ray,
But glory from the sacred throne,
Spreads everlasting day.

Prepare me, Lord, by grace divine,
For thy bright courts on high,
Then bid my spirit rise and join
The chorus of the sky.

W. M.

CHRISTIANITY.

CHRISTIANITY is not only a living principle of virtue in good men, but affords this further blessing to society, that it restrains the vices of the bad. It is a tree of life, whose fruit is immortality, and whose very leaves are for the healing of the nations. — *Andrew Fuller.*

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Richard II. and his Court.

ENGLISH HISTORY.

RICHARD II.

THE animated lines of the poet Gray well describe the last hours of Edward III., and the eventful character of the reign of his grandson Richard II.

"Mighty Victor, mighty Lord,
Low on his funeral couch he lies!
No pitying heart, no eye afford
A tear to grace his obsequies,
Is the sable warrior fled?
Thy son is gone. He rests among the dead.
The swarm that in thy noon-tide beam were
Gone to salute the rising morn. [born,

Fair laughs the morn, and soft the zephyr blows,
While proudly riding o'er the azure realm,
In gallant trim, the gilded vessel goes;
Youth on the prow, and pleasure at the helm;
Regardless of the sweeping whirlwind's sway,
That hush'd in grim repose, expects its evening prey.

Richard II., surnamed of Bourdeaux, from the place of his nativity, was the only son of the Black Prince, and was proclaimed king of England when a boy of eleven years of age. His appearance and manners were pleasing, and his father's popularity gave a general impression in his favour. But there was a worm at the root of the bud, and as his character unfolded, he was found worthless and depraved.

Those who had the direction of public affairs were unpopular, and their acts improvident. The temper and bearing of John of Gaunt, the king's uncle, were not pleasing, and caused his exclusion, for some time, from that active part in the government to which his rank and circumstances seemed to entitle him. By his marriage with his first wife, the heiress of Lancaster, he had acquired the large estates he possessed; and from his second marriage with one of the daughters of Peter the Cruel, he advanced an empty claim to be king of Castile and Leon, and assumed the title; but he had been, and still was unsuccessful as a commander against the French, and he excited the displeasure of the clergy by patronizing Wickliff, whom he protected when called before an ecclesiastical court, in 1377.

The war with France, and the needlessly profuse expenses of the coronation, caused a demand for money, and the Commons procured the appointment of persons to control the expenditure.

The war between England and France consisted of desultory expeditions, ravaging the towns and country near the sea-coast, and proved effectual only in

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adding to the national guilt, and demoralizing those who engaged in them.

A well authenticated instance will show the reader the dreadful results of such war, even to the country to which the ravagers belong; and conveys no desirable picture of the state of things in this period.

In 1380, Sir John Arundel headed a large body of troops, assembled in Hampshire, and about to proceed upon an expedition against Brittany. They were wind-bound for some time, and their leader, not contented with permitting the usual military licentiousness of robbing the peasantry of their provisions and ill-treating their persons, went to a neighbouring nunnery, and required that his knights might be permitted to visit the inmates. The abbess in vain refused, the civil power did not interfere; and when the troops embarked, they carried with them most of the nuns. A tempest arose, when these atrocious ruffians imputed their danger to the Divine displeasure, not on account of their wicked conduct, but because they had on board females who were dedicated to sacred services. With this impression, they hastened to cast the helpless victims into the sea. We cannot regret to find that the just vengeance of the Almighty pursued them; the vessels were wrecked on the coast of Ireland; where the leader and most of his followers perished.

These worse than fruitless expeditions, and the profusion of the court, rendered supplies of money necessary, and the parliament in two successive years imposed a poll-tax, which all persons above fifteen years of age were to pay, according to their rank, the lowest sum being a groat. This payment being evaded, an effort was made to collect it, in the eastern counties, with much severity. The collectors were encouraged to conduct themselves with brutality, especially in the families of the lower classes; and the spirit of discontent already roused in their minds by the privileges assumed by the nobility, was now driven to desperation. A baker at Fobbing in Essex urged his neighbours to open insurrection, and the commonalty of Essex and Kent were soon in a state of excitement. A judge was sent into Essex to punish the insurgents, but they obliged the legal officers to fly. Another judge was compelled to relinquish the trial of offenders in Kent; and Wat the Tyler, an inhabitant of Dartford, being enraged at an insult offered to his daughter by the tax-collector, slew the offender. Another party released the priest Ball from the archbishop's prison at Maidstone, and the insurrection became general.

The insurgents collected at Blackheath, to the estimated number of 100,000, acknowledging Wat Tyler as their leader. The ministers of Richard persuaded him to refuse to listen to their grievances, calling them, "shoeless rebels." Excited by this refusal to farther acts of outrage, they proceeded to Southwark, and when the Lord Mayor caused the gates at the foot of London Bridge to be closed, the people opened them, and allowed the insurgents to enter. They committed no acts of rapine, but declared that they only required the redress of grievances; and their demands were certainly just and moderate. They desired the abolition of slavery, and the payment of rent for land instead of personal services, by which a tyrannical lord would often oppress his vassals; and that all should have equal privileges of buying and selling. They were joined by numbers from the neighbouring counties, and it was known that many others were on their way from a distance.

The young king, with a part of his court, had an interview with the largest body of Tyler's followers, at Mile-end, and gave them a charter, abolishing the slavery in which the lower orders had been held so long. But the rest of the mob, who had remained on Tower-hill, forced an entrance into that fortress, seized Simon of Sudbury, archbishop of Canterbury, then lord chancellor, and beheaded him and some other unpopular ministers. They then destroyed the Savoy, the palace of the duke of Lancaster; and during seven days committed many acts of plunder, devastation, and murder.

This conduct soon brought matters to a crisis. Other charters were given, but they were not satisfactory; and the king agreed to meet their leaders in Smithfield. Wat Tyler required that all the lawyers should be beheaded, and made other similar demands. While the king was pausing as to his reply, Tyler took hold of the bridle of the monarch's horse, when Walworth, the mayor of London, struck a short sword into the throat of the rebel leader; another also struck him, and he fell dead on the spot. The rebels, seeing

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this, shouted aloud for vengeance, and drew their bows; but the king, with admirable presence of mind, rode up to them, saying, "Why this clamour, my liege men? What are ye doing? Will ye kill your king? Be not concerned for the death of a traitor and a scoundrel. I will grant all that you can ask." The multitude were stayed, and while they parleyed with the king, Walworth collected a thousand armed men, who, with Sir Robert Knolles as their commander, hastened to rescue their monarch. The multitude were then seized with a panic fear, threw down their weapons, and fled, the king forbidding pursuit.

Thus ended this insurrection. There were also disturbances in several parts of the country, mostly before that headed by Tyler; but these were soon suppressed. That in Norfolk was the most formidable, but it was put down chiefly by the active exertions of the bishop, who headed his forces in complete armour. The only person distinctly aimed at by the insurgents was the duke of Lancaster, who was sought for by two large bodies of rebels, and compelled to flee to Scotland. It is thought by some, that considering his attachment to Wickliff, this was probably an organized effort of his ecclesiastical enemies to direct the popular fury against one whose dislike to the errors of popery alarmed them.

As soon as the court recovered from its alarm, the king revoked the charters he had granted. A commission was issued for the trial of the offenders, and a contemporary historian states that several hundred persons were hanged or beheaded.

Turner, in his history of this period, remarks, that this insurrection must have been excited by operations out of the common way, and enumerates several causes which combined to produce these disturbances, and also that general discontent, which ended in the revolution by which Richard was dethroned. These may be stated as arising—1. From the wars with France. In the changed state of affairs, the French made descents on the coast of England, and the disbanded and unemployed soldiery went about committing acts of outrage and plunder. These circumstances both excited discontent, and called forth characters to take an active part in the insurrections which ensued. 2. The free population had increased, and the state of society in general had improved, which rendered very obnoxious the bondage of slavery, in which a large number of the common people were held, and made them eager for its abolition. The state of France was very similar. 3. The wealth and corruptions of the clergy, who considered themselves a distinct and privileged order, forgetting the principle laid down by the apostles, that they were servants of the church at large, for Christ's sake. The doctrines of truth were sedulously opposed by these ecclesiastics, but the community could not but contrast their actual proceedings with the precepts of Christ, and felt more and more indisposed to submit to their assumptions and encroachments. There was also increasing eagerness to diminish the vast and disproportioned possessions of the monastic bodies, and of the clergy at large. All these causes produced a desire for change in the discontented and oppressed, while those who sought to rivet the chains of civil tyranny and ecclesiastical domination, were not unwilling to see an outbreak of popular licentiousness and tumult, being assured that such demonstrations would supply a strong argument against all alterations which tended to limit their own authority, and to improve the state of society in general.

Such is the view given by *Turner*, and it appears correct, when applied to the history of this reign. In other periods a similar state of affairs will often be found productive of similar results.

The personal character of the ruler has usually a considerable influence upon an unsettled state of society; and Richard II. was an individual precisely suited to excite civil discord and revolution. He came to the throne a mere boy, and those about him seem to have sought to spoil him by flattery, rather than to give his mind a right bias. Weak, indolent, and vicious, attached to favourites as weak and vicious as himself, he had neither the respect nor the affection of his subjects; while his profusion and carelessness left him always in need; and he pressed heavily on the middle and higher ranks, by the weight of taxation. All these evils have been fully described by contemporary writers. In addition to his personal expenditure for dress and other articles of ostentation, at one period of his reign, 10,000 followers were provisioned from his palace, and 300

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servitors were employed in his kitchen. This state of affairs must have had a wide effect upon the community. The nobles and subjects in general imitated their monarch; a taste for luxury and expense was cherished, which engendered a spirit of rapacity and oppression, and made every class desirous of change. The fantastic and costly garb of Richard's courtiers is shown in the drawings of those times. Though both extravagant and unbecoming, it was encouraged by the weak and frivolous monarch. Scripture tells us that much depends upon the personal character of the sovereign, both from the indirect influence of his example, and the direct measures of his government. "If a ruler hearken to lies, all his servants are wicked," Prov. xxix. 12. Richard II. had no desire to enforce order or virtue, and the histories of ancient and modern times equally prove, that unless private morality prevails in high places, there can be no hope for public prosperity and tranquillity.

These remarks especially apply to the latter years of this reign; and afford a clue to the events which followed.

The ensuing years were chiefly distinguished by internal discords, in which the duke of Lancaster was accused of treasonable designs, and the ambitious and discontented warrior nobles seemed about to plunge the nation into a civil war; but the queen-mother exerted herself to reconcile the king and his uncle, and this was with difficulty effected. John of Gaunt, after an invasion of Scotland, which produced little advantage, went abroad upon an expedition against Spain, being eager to acquire the kingdom of Castile, which the Pope had authorized him to seize. The climate brought sickness and mortality among his troops, and the expedition ended without success. His absence induced the king of France to make large preparations for invading England, but after much expense and trouble had been incurred, the design was relinquished. During the absence of John of Gaunt, the conduct of the king and his favourites, Vere, duke of Ireland, and De la Pole, earl of Suffolk, excited the displeasure of the parliament. At first, their remonstrances were unsuccessful, the king declaring that he would not turn out the meanest scullion to please their humours. But his parliament insisted on his appearing in person to hear their complaints, and this weak monarch was soon compelled to dismiss the chancellor, whose estates were confiscated; and a commission of fourteen prelates and nobles was appointed to conduct the government, under the direction of the duke of Gloucester. Considering the early age of Richard, we must regret that these commissioners did not endeavour to produce better conduct on his part.

The king did not readily submit to this restraint; he met his favourites at Nottingham, and requiring the attendance of the judges, procured from them an opinion that the royal prerogative was above law. He then endeavoured to raise a military force to act against the members of the parliament, who were denounced as traitors; but the voice of the people was against these measures. The barons were effectually supported; the king endeavoured to raise forces to oppose them; but these were outnumbered and dispersed at Radicot, in Oxfordshire. The favourites were forced to flee, and some of their active supporters were executed. The king desired to destroy every one who opposed his tyranny; and the nobles, including the duke of Gloucester, one of the king's uncles, discussed whether they should attempt to depose their monarch. All this took place before the king was twenty-one years old.

In 1389, the king declared himself of age, and appointed as his chancellor, William of Wickham, the bishop of Winchester, who assured them that the king would govern better in future. Soon after this the king showed that his love of pleasure and ostentation was unchanged, by causing shows and tournaments to be exhibited with much cost and magnificent display. A better spirit was manifested by the king's refusal to sanction two measures recommended by the parliament, which would have enabled the nobles to enslave such of their vassals as had been made free of corporate towns, and prevented any children of the villeins, or lower class, from entering the church. He had, however, not long before, consented to some laws, which limited the rate of wages in a very oppressive manner, and confined labourers to their own districts, besides preventing the children of a farmer from following any other occupation, unless begun before they were twelve years of age.

Some years passed away, during which

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much discontent prevailed, but the people were restrained from open violence. The queen, Ann of Bohemia, died, much lamented, and an alliance with France was formed by a contract between the king and the French princess Isabella, then only eight years of age. This alliance was very displeasing to the nation, and added to the popularity of the duke of Gloucester. The king now exerted himself. Froissart says he began to reign more fiercely than before, and that none dare speak against any act of the king. In 1397, having a parliament favourable to his views, he proceeded to violent courses. He had previously conciliated the leading ecclesiastics by severity against the followers of Wickliff, who were styled the Lollards. They had lost a valuable supporter in the "good queen Ann," one of the few females of rank in those days, who were truly illustrious by the study of Scripture; John of Gaunt was also absent. They were assisted by the co-operation of many who were desirous of political reform and worldly freedom, and only assumed a desire for the liberty sought by the followers of the truth to conceal and advance their temporal views.

The king accused his uncle, the duke of Gloucester, of treason. The particulars alleged against him were of some years' standing, and did not extend beyond a dislike to his nephew's conduct, and a desire to restrain his evil courses; he had also censured the king's intercourse with France. The whole proceeding inflicts indelible disgrace on Richard. He visited his uncle at his seat at Pleshy, was entertained there, and by false pretences persuaded the duke to return with him to London. There Gloucester was betrayed into the hands of armed men placed to arrest him; and having been carried privately to Calais, he was murdered by being smothered between two beds. The earl of Arundel, another popular nobleman, was also executed.

Richard now assumed absolute power. He was more prodigal than ever, and in all things followed the caprice of the moment. He raised large sums by forced loans, and availed himself of every opportunity to establish his despotic authority. A remarkable instance of this, which now occurred, tended to his overthrow. The duke of Norfolk told Henry, duke of Hereford, the son of the duke of Lancaster, that the king had formed designs against his father and himself. Hereford saw that the best way to defeat such a plan was to make it known, while he had no wish to screen Norfolk, who had been one of the king's instruments in the arrest of the duke of Gloucester. Hereford, therefore, publicly mentioned in parliament this communication of Norfolk, affecting to consider it as a slander against the king. Norfolk being involved in his own toils, denied the charge, and challenged Henry to single combat, according to the knightly fashion of that age; this was then permitted by the law, and magnificent preparations were made for the fight between these powerful nobles. The combat was just about to begin, when the king seized the opportunity for displaying his power, and for getting rid of two discontented chiefs, one of whom was too popular to be endured, and the other, if defeated, might have disclosed particulars of Richard's guilt, which the king was anxious to suppress. He forbade their fighting, and sentenced Hereford to banishment for ten years; Norfolk to perpetual exile. Nearly the whole of the property of the latter was confiscated, and John of Gaunt dying soon after, the king seized the patrimony of Hereford. Other violent measures followed. The earl of Northumberland was banished, and his property confiscated; large payments were exacted from various parts of England, on the plea of acts against the royal favourites, some of long standing.

The king's infatuation was equal to his tyranny. Having thus set the whole kingdom against him, he went to Ireland with a large army, and easily ravaged the country, but its wild and uncultivated state rendered his conquest of little avail; meanwhile England was left under the government of one of the king's uncles, the duke of York, a weak-minded, inactive character.

All England was now excited against Richard. Bands of armed men appeared in every part, plundering the neighbourhood, and ready for more extensive action. Several of the nobles consulted with the leading citizens of London, and the result was, a determination to recal Hereford. The archbishop of Canterbury, disguised as a pilgrim, proceeded to the continent, and had a secret interview with Henry at Paris; and the injured noble, after some reluctance, agreed to forward these plans. He embarked in

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July 1399, and reached the coast of Yorkshire with fifteen knights, and eighty followers, who landed there. He publicly stated that his object was only to recover the estates and titles which had belonged to his father. The Percys and others joined him in such numbers, that he soon found himself followed by 60,000 armed men.

The state of communication between England and Ireland was then widely different from what it is now, when, under similar circumstances, letters are conveyed from London to Dublin in about thirty hours. Westerly gales prevailed for six weeks, and till that period had elapsed, Richard was wholly ignorant of the arrival of Hereford. He then learned his progress, and that he was supported by the archbishop of Canterbury, who, in the name of the pope, promised the remission of their sins to all who would engage in this rebellion!

An old drawing, here copied, represents the prelate reading this impious bull to the people. How widely this differed from the message announced by Ezra, when he "stood upon the pulpit of wood," and read in the book of the law of God distinctly, and gave the sense, and caused the people to understand the meaning of Scripture. How contrary was this papal decree of the pretended successor of Peter, to the written words by that apostle; "Love the brotherhood—Fear God—Honour the king."

Richard was persuaded to linger in Ireland. He sent over the earl of Salisbury, while he waited for vessels to transport his army. That earl was joined by many men in Wales and Cheshire, and had assembled 40,000 followers, but eighteen days passed, and the king did not arrive, while Hereford approached at the head of a larger force, having visited London, from whence he marched westward, and took Bristol, where he seized and executed some of the king's unworthy favourites. A rumour prevailed that Richard was dead, and in spite of the active efforts of their leader, his army dispersed, and Salisbury remained with only 100 followers.

Richard landed at Milford, in August, 1399; but observing that the popular feeling was against him, he assumed the garb of a priest, and rode with a few attendants to meet Salisbury, whom he found at Conway. The earl in a few words told him, "all was lost," when the king is stated to have offered a sort of prayer or address, declaring his integrity and the uprightness of his recent proceedings.

The troops brought from Ireland by the king, were alarmed at his deserting them, and they speedily dispersed, after plundering his rich effects; but these ill-gotten articles soon became the prey of the Welsh, who assembled armed bands, and attacked the English as they returned to their homes in detached parties.

Richard retired to Caernarvon, where he remained some days in so destitute a condition as to lie on straw. In this state, he prayed earnestly for succour to the virgin Mary. But, as in the case of the worshippers of Baal of old, "there was neither voice, nor any to answer, nor any that regarded," 1 Kings xviii. 29. Such prayer is worse than useless, for "there is none other God but one," 1 Cor. viii. 4.

The king now, in despair, sent to Henry, to learn his intentions. Hereford held a consultation with his supporters, and as Richard still had access to the sea, by which he might escape, it was resolved to secure him by treachery. Thus his conduct to his uncle, the duke of Gloucester, was visited upon his own head.

Pearcy, duke of Northumberland, was sent to Richard, and after a solemn

protestation of truth, proposed as the terms required by Hereford, that this nobleman should be restored to his honours and estates, and appointed the king's justiciary, and that those who were concerned in the arrest and murder of the duke of Gloucester should be put to death. The king pretended to agree to these terms, after a private consultation with his adherents, in which it was settled that efforts should be made to collect forces, and that, if successful, he would not spare Hereford and his adherents, but "would flay some of them alive, if he continued alive and well." Painful and disgusting to relate, Northumberland and the king both heard mass as a solemn pledge of their agreement, while each of them had treacherously determined to break it! The king was notoriously regardless of the obligations of religion, and Northumberland probably felt assured that he could obtain absolution from the archbishop. It is evident that the king's self-conceit prevented his discerning the just causes for dissatisfaction among his subjects, and that he mistook what had happened, regarding it as merely the factious proceedings of a few discontented nobles. And he forgot, perhaps he never knew, the plain declarations of Scripture against all who seek to deceive others.

The king now proceeded towards Chester, Northumberland going forward. A part of the road suitable for the purpose was chosen, and there Richard found himself surrounded by armed men, without the possibility of retreat. The truth then flashed upon his mind, and he would have returned to Conway, but was compelled to proceed, yet treated with outward respect. The next day he was received by Hereford at Flint, with the mockery of outward submission. The earl of Salisbury and the king were then mounted on two wretched horses, and conducted to Chester. Froissart relates that the painful feelings of Richard were aggravated by beholding even his favourite greyhound leave his side, and fawn upon Hereford. From Chester, the king and his conqueror proceeded to London, where Richard was lodged in the Tower, and carefully guarded, while Hereford was greeted with loud acclamations.

On Michaelmas day Northumberland reminded the king of his confession of inability to reign. The same day, in the presence of Hereford and the archbishop, Richard signed a deed, whereby he abdicated the crown, and absolved his subjects from their allegiance.

We cannot suppose that Richard willingly consented to the act: he probably still clung to the hope that events might yet take a turn in his favour. The act of cession was produced in full parliament, and recorded. Henry then arose, and after crossing himself, claimed the crown. The Lords and Commons were desired to state their opinions; when they declared their assent that he should be king. He was led to the throne by the archbishop, and there he kneeled and insulted his Maker by the mockery of a prayer, for we cannot characterize in any other manner supplications for support, in an act forbidden alike by the laws of God and man. These proceedings were made known to Richard, who remained in close custody, while his cousin was crowned as Henry IV.

Thus fell Richard II., at the early age of thirty-four; a proof of the utter uselessness of supporting lawless proceedings by violence, and a striking instance of awful retribution to the evil doer, even in this life. Every event in his reign shows his character, and he is thus described by a contemporary writer, "A fair, round, and feminine face, sometimes flushed; abrupt and stammering in his speech; capricious in his manners; prodigal of gifts; extravagantly splendid in his entertainments and dress; timid and unsuccessful in foreign war; irascible, proud, and rapacious at home; devoted to luxury; and remaining sometimes till midnight, and sometimes till morning, in drinking, and in other excesses that are not to be named; grievously extorting taxations from his people every year of his reign, and wasting on his vices the money obtained under the pretext of repelling the national enemy."

The death of Richard belongs to the reign of the usurper. And Henry must be considered as a usurper, so far as the hereditary right to the throne is concerned. Richard died without children; but the succession devolved upon the earl of March, the grandson of Lionel duke of Clarence, who was the elder brother of the duke of Lancaster. The earl of Mortimer, the son of Lionel, had been publicly acknowledged by Richard in 1385, as heir presumptive to the crown, and appointed governor of Ireland, where he was slain; and to avenge

his death was the principal reason of Richard's last ill-judged expedition to that country. The earl of March, his son, was now a child, and had no one to plead his cause, and assert his title to the throne.

There were no events in the reign of Richard II. that were so important in their results as those connected with Wickliff and his followers; but our limits forbid more than a brief general view of these important particulars. For farther details the reader may refer to "Fox's Acts and Monuments," and to "the Lollards," and "The Life and Writings of Wickliff and his Disciples" in the "British Reformers."*

Wickliff was born in Yorkshire, in 1324, and became a member of the University of Oxford. The awful pestilence which ravaged Europe about 1350, deeply impressed his mind; and beholding the wretched and corrupt state of the church, with the general licentiousness then prevalent, he warned the careless generation in which he lived, both by his preaching and writings. From the latter, it is plain that he possessed that reliance for salvation on a crucified Saviour, which alone can save a guilty sinner: and that it was a deep sense of the Saviour's love which excited him to seek the spiritual welfare of his fellow-men. He opposed the vices and rapacity of the begging friars, and wrote boldly against the usurpations of the popedom, denouncing the vices and ambition of the contenders for the papacy, who involved Europe in war by their unchristian disputes. He also rebuked the conduct of the clergy in his own land, and did not hesitate to pronounce a wicked and unholy priest to be undeserving of support; thus he disputed the infallibility of the priesthood, then asserted by the ecclesiastics. He was a mourning prophet, like Jeremiah, and warned his nation of judgments to come, and called upon them to repent. Wickliff, though attacked by the prelates, was supported by the duke of Lancaster and other nobles, with the great body of the middle class, who declared their attachment to the reformer, when he was cited by the direction of the pope, before a synod at Lambeth, at the commencement of this reign. This support, and an explanation which the reformer gave of his tenets, prevented violent proceedings against him; but the farther examination of the subject occasioned by this attack, caused Wickliff to see more clearly the abominations of the papacy, and he never shrank from fully declaring what he believed to be the truth.

The efforts of the church of Rome to prevent the circulation of the Scriptures were opposed by Wickliff, and in 1383 he completed a translation of the Bible into the English language, which excited the displeasure of the Romish priesthood. Knighton, a canon of Leicester, says, "Christ delivered his gospel to the clergy and doctors of the church, that they might administer to the laity and to weaker persons, according to the state of the times, and the wants of man. But this master John Wickliff, translated it out of Latin into English, and thus laid it more open to the laity, and to women who can read, than it had formerly been to the most learned of the clergy, even to those of them who had the best understanding. And in this way the gospel pearl is cast abroad, and trodden under foot of swine, and that which was before precious to both clergy and laity, is rendered, as it were, the common jest of both! The jewel of the church is turned into the sport of the people, and what was hitherto the principal gift of the clergy and divines, is made for ever common to the laity." Such was the language of a contemporary, and tens of thousands have had cause to bless God that Wickliff was permitted to set forth the bread of life among them. A more guarded modern popish historian admits the important results of Wickliff's labour; he says, "A spirit of inquiry was generated, and the seeds sown of that religious revolution, which, in little more than a century, astonished and convulsed the nations of Europe." Yes, to this work and its results we are chiefly indebted for the light and liberty enjoyed in our land. Wherever there is sin, suffering will be found, and there is in Protestant England sin enough to deserve the Divine judgments; but no one acquainted with the history of our land in popish times, or with the real state of countries still enveloped in papal darkness, will hesitate to admit the decided improvement in every way produced by that blessed reformation, to which Wickliff was so mainly instrumental. To this we owe our civil rights and privileges, and the spirit of active beneficence, which alone can ameliorate

* The two latter works are published by the Religious Tract Society.

the general state of society, and the proofs we have, that "righteousness exalteth a nation." We have already noticed the attempts that were made to impute the tumults of the oppressed labourers during this reign, to the doctrines of the reformer; but the history of other countries, as well as of this land, show that they originated from the ignorance and oppressions sanctioned by popery. The church of Rome has ever endeavoured to impute to its opponents the evil consequences which in truth belong to itself.

The sensuality and ostentatious profusion of the monastic orders at that time, is recorded by many contemporary writers, and so far from these establishments relieving the poor of the land, Wickliff does not hesitate to accuse the abbots and ruling ecclesiastics of perverting the provision made for this purpose, "making costly feasts, wasting many goods on lords and rich men, suffering poor men to starve and perish for hunger, and other mischiefs."

The absurdities of transubstantiation engaged Wickliff's attention, and in 1381 he openly opposed them. His views and arguments carried great force, and influenced many, both among the nobles and Commons. The prelates were alarmed, and not only condemned the reformer and the doctrines of truth he promulgated, but procured a law, enacting that every one who favoured these opinions should be imprisoned. The extent to which these views had been diffused, appears from the statement of a contemporary, who speaks of one half of the kingdom being attached to Lollardy. This persecuting law was surreptitiously obtained by the clergy, it never had the proper legal sanction of the king and parliament; but the archbishop obtained letters from Richard, authorizing the prelates to detain offenders in their own prisons. Every prelate then had a prison in his palace, the horrors of which were sufficient to shake the constancy, or unsettle the reason of those accused of heresy!

Wickliff did not shrink from the storm which now burst upon his followers. He showed that he was not a political reformer, and though age and infirmities increased upon him, he boldly confessed the truth, and defended his doctrines before the prelates and the university. He was sentenced to be expelled from Oxford, and cited to appear in person before the pope, but he defied both. He continued to reside at his living of Lutterworth, preaching the truth, and addressing the king, the people, and the pope, by his writings, expecting that ere long he should be subjected to personal sufferings; but his course was nearly run; on the 29th of December, 1384, he was struck with paralysis while administering the Lord's Supper, and deprived of the power of speech. He remained two days in this state, unconscious of what passed, and expired on the last day of the year.

The disciples of Wickliff were numerous in every rank and class of society, and were of two descriptions; those whose hearts were really changed, and whose lives gave testimony to their faith in Christ; and, on the other hand, those who saw the errors and usurpations of popery and opposed them, but could not renounce the world for Christ, or who sought to advance their worldly interests by their religious profession. Hereford, Ashton, Purvey, Brute, Swinderby, and others, boldly preached the truth from one end of the kingdom to the other; they, being driven from their churches, preached in private houses, or by the way-side, and in market-places, but they successively fell into the power of the church, and were silenced by sufferings and imprisonment; for it was not till the following reign that the prelates were allowed to burn publicly the devoted followers of Christ. That dark hour approached, for in 1387 their writings were ordered to be destroyed. Still, as late as 1394, there were active and leading characters, who did not hesitate to stand up for the truth in parliament, and to denounce the Romish ecclesiastics: but the king was induced to interfere, and prevent the nobles from supporting the Lollards and their proceedings, against whom censures were again repeatedly pronounced. The struggle between the advocates of light and darkness became daily more severe, and at the close of the reign of Richard, enmity against the truth appeared strikingly evident in the ecclesiastics. The peculiar state of public affairs, and the influence of some of these in the proceedings of government, necessarily entangled the reformers in public, and sometimes in political proceedings; but the larger portion of their writings relate to the doctrines of the

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gospel. How thankful should we be that the name of Wickliff is now an honoured name, and that "the English Bible," for which we are primarily indebted to him, is now an honoured volume, instead of being denounced as poison for the soul! Wickliff and his associates in the great work of turning many to righteousness, now shine as the stars, Dan. xii. 3, while the brilliant characters of that day have found the end of their worldly honours to be the "blackness of darkness for ever."

We may conclude this summary notice with a brief extract from the "Poor Caitiff," one of Wickliff's popular tracts, which will show how fully he directed the inquiring soul to that name which is above every name, and in which alone is salvation. "This name Jesus, truly held in mind, rooteth up vices, planteth virtues, bringeth charity or love to men, getteth men savour of heavenly things, wasteth discord, informeth peace, giveth everlasting rest, or doeth away heaviness of fleshly desires. All earthly desires, all earthly things, it turneth into heaviness. It filleth those that it loveth with spiritual joy; so that worthily it may be said, All shall be glorified in thee that love thy name, for thou shalt bless the righteous. The righteous deserveth to be blessed, for he hath truly loved this name, Jesus. He is called righteous, because he seeks earnestly to love Jesus. What can fall to him who unceasingly covets to love Jesus? He loveth, and he desireth to love, for thus we know the grace of God to stand; for the more we love, the more we covet to love."

Walter Brute, or Britte, a descendant of the Britons, and one of the disciples of Wickliff, in a declaration before the bishop of Hereford, in 1390, thus boldly attacks the power of absolution assumed by the priests. "To confess sins unto the priest as unto a judge, and to receive of him corporal penance for a satisfaction unto God for his sins committed, I see not how this can be founded upon the truth of the Scripture. For, before the coming of Christ, no man was sufficient or able to make satisfaction unto God for his sins, although he suffered ever so much penance for his sins. And therefore it was needful that He who was without sin should be punished for our sins, as witnesseth Isaiah, chap. liii. where he saith, "He took our griefs upon him, and our sorrows he bare." And again, "He was wounded for our iniquity, and vexed for our wickedness." And again, "The Lord put upon him our iniquity." And again, "For the wickedness of my people have I stricken him." If, therefore, Christ by his passion hath made satisfaction for our sins, whereas we ourselves were unable to do it, then through him have we grace and remission of sins. How can we say, now, that we are sufficient to make satisfaction unto God by any penance enjoined unto us by man's authority, seeing that our sins are more grievous after baptism than they were before the coming of Christ?"

ON LIFE, AND ON THE DISTINCTION BETWEEN ORGANIC AND INORGANIC BODIES.

When we yield our mind to reflect upon the natural objects by which we are surrounded, our thoughts lead us, almost intuitively, to arrange them under two great heads, the one including such as are living, the other such as are not; to the former has been applied the term *organic*, the term *inorganic* to the latter. A broad line of division being thus drawn, as if by a spontaneous act of analysis, the question immediately presents itself, What is *Life?* What is that, the effects of which appeal so forcibly to the senses, as to render the distinction of organic and inorganic matter one of our most familiar ideas, the first and almost unconscious result of our earliest observations? Life, abstractly considered, is a mystery; indeed it cannot be contemplated in an abstract point of view, but must be studied solely through the phenomena which organic bodies manifest. The diligent investigation is strictly within the province of the physiologist; yet it will not be out of place, if we proceed to a cursory notice of the great and ultimate results which, constituting the essential characteristics of organic bodies, are dependent upon laws beyond the research of human industry, or at most but imperfectly understood.

The first thing that strikes our notice, on an attentive consideration of the nature of organic bodies, is the vital union of the particles of which they are composed. We say vital union, because it is similar to no other aggregation of matter. It is a union in opposition to the laws which govern the particles of all inor-

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ganic bodies, a consenting union of solids and fluids intimately blended, having common and mutual dependencies and relationships, and forming a definite whole; whence results, that all organic bodies possess a determinate form, certain essential parts, and a structure, upon which rests their claim to their accepted appellation.

Determinate, however, as the form and structure of organic bodies may be, their organization is not made up of a changeless aggregation of particles, as we see in crystals, or other inorganic bodies; on the contrary, by the agency of their vital powers, a perpetual change is unceasingly carried on, the particles which were lately incorporated being thrown off, and others, foreign and inorganic, being taken up and incorporated, to be thrown off in their turn. Thus do organic bodies maintain their triumphant struggle against the laws of inorganic matter, and thus do they preserve their identity through the revolutions which are the effect and proof of vitality, till at length, ceasing with the extinction of that mysterious principle, these operations give place to the laws of chemical affinity, which exert unopposed their influence.

"Dust thou art, and unto dust shalt thou return."

But whence come organic bodies—how do they begin to be? is a question which naturally arises in the mind. Every organic body is the product of another antecedent to it, termed its parent, which it essentially resembles, *like* producing *like*. But the new organic body is not produced at once in a state of full maturity, with all its parts and powers developed; on the contrary, its first existence is that of a germ or embryo, and it attains more or less gradually to its independence and perfection. Thus every organic being has once been part and parcel of a being like itself, from which it has received its vital energies. In that parent is its origin; life springs from life, and has been transmitted through an unbroken chain of being since the fiat of creation; for creation alone can originate the first living thing.

"All organic beings," says Cuvier, "have been partakers of the life of another body before being endowed with independent vitality; and it is in consequence of the vital energies of the body, of which they then formed a part, that they become developed to such a point as to be susceptible of an independent state of existence."

In this state, then, every vitalized body has its own resources within itself, its own inwrought energies; and it lives and grows, or acquires its complete development, by powers acting in direct contradiction to the laws of inorganic matter; such matter being the *pabulum*, or nutriment of life.

The growth or development of organic bodies, like their form and structure, is bounded, fixed, and determinate. As is the parent, such will be the germ. The lily aspires not to the magnitude of the cedar, nor will the mouse ever attain to the bulk of the gigantic elephant. It is in vain to inquire into the reasons why the growth of living bodies should cease; why, having commenced, it should not continue indefinitely, or how the vital energy modifies the phenomena of nutrition, both by the acquisition of particles, assimilated to the system, so as to form an integral portion of its structure, and, by the rejection of such as are useless or noxious, a due balance on either side being maintained. We see the fact, we feel it to be interwoven with the laws of life; more is beyond our grasp. But instead of inquiring into the vital causes which regulate the growth of living bodies, let us rather turn our attention for a few moments to the mode by which they grow.

We have already said, that organic beings maintain their existence, and become duly developed, in consequence of the reception and vital incorporation of particles of extraneous matter, which counterbalance the loss occasioned by the throwing off of such as, having been incorporated, are no longer necessary to the wants and well-being of the system. But we shall be better understood by entering into a few more minute details.

If we examine the internal organization of any living body, we shall find it to be constituted of a union of solids and fluids; the solid parts consisting of *molecules*, minute particles, so arranged as to form fibres and tissues of various density and various structure. But every where are these solids pervaded by a circulating fluid, from which the particles composing them are elaborated, and by means of which the organic system is thus nourished. When we attempt to investigate beyond a certain point, the

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intimate texture of the solids, we are foiled; no instrument can follow, no eye can scan, the *ultimata* of their organic structure. It is the same with regard to the circulating fluids. By the aid of the microscope, we indeed discover in the blood globules of wonderful minuteness, but this is all. If we apply to chemistry, what do we learn from her researches? that the elements of organic bodies are carbon, oxygen, hydrogen, azote, and alkaline and earthy salts; here her information ends. Chemistry, potent over the vast empire of inert matter, here betrays her insufficiency. Within her own dominions she can analyze and combine; make solids fluid, fluids solid; resolve things into their elementary gases, and recombine them; ascertain the necessary proportions in which two or more bodies combine, whence shall result a product totally differing from each component in character and properties:—all this, and more, is within her power; but she cannot recompose a single fluid, nor a single solid of any organic body. Here her penetration is baffled, and her art at fault. If, then, chemistry cannot appreciate the true nature of the constituents of organic bodies, neither can she appreciate the means by which they maintain their specific differences, not only as it regards form, but the qualities also of their substance; qualities which widely differ even where the same nutriment in each instance is received. The same soil, the same water, the same air, may nourish the aconite and the vine, the rose and the hemlock; their very roots and leaves may be intertwined, but their identity, and their specific properties will be unaltered.

The hidden mysteries of nature are too deep for man to fathom; his researches are limited, his sphere bounded. Such, then, is the mystery which shrouds the structure of organic bodies; a structure which, though it defies our investigation, we see to be perpetually undergoing change; not, indeed, by the action of external agents upon it, but by its agency upon them: hence do living things grow and maintain their existence; and hence are such phenomena termed, collectively, the process of nutrition.

The process of nutrition, is the primary and leading feature of vitality; nothing but an organic being, however it may become increased in bulk, or altered in form, can exemplify this aggregate of phenomena. To these phenomena let us immediately attend. The first operations of an organic body, commensurate with its beginning to develope, are exhibited in the alteration of the medium surrounding it. Oxygen is the grand pabulum of life; its presence is necessary to the performance of every vital operation; deprived of it, a living body either ceases its organic existence, or is incapable of developing into activity.

Oxygen, therefore, whether as forming a component part of the air which surrounds our globe, or of the water which covers so large a portion of its surface, or of any other fluid wherein organic beings exist, is an essential prerequisite. Nor do we here forget temperature. Warmth, taken in an enlarged sense, is the first nurse of life; the stimulus which rouses the latent powers of every organ, while the embryo is yet dormant; but the moment an embryo begins to grow, a germ to expand, from that moment does a decomposition of oxygen take place. It is absorbed by the pores of the bud and the leaf; it enters into the texture of the skin; it is submitted to the circulating fluid, be it sap, or blood, at once producing a mighty and energetic influence, itself entering into union with some of the elements of the circulating fluid, and so forming other products.

Thus prepared by oxygen for the purposes of the organic economy, the sap or blood is carried along, through tubes ramifying to an almost infinite degree of minuteness, and pervading every part. And here we have to glance at that extraordinary vital property which these tubes possess, and upon which their action depends, termed by physiologists irritability, or *irrito-contractility*. By irritability, is meant a property residing in the fibrous parts of organic bodies, though perhaps not exclusively so, since the gelatinous animal of the sponge exhibits by a tremor when touched, its diagnostic symptom; which property may be defined a responding to the action of various and appropriate stimuli, external or internal; and it is exhibited in contractile or expansive movements. It is this faculty that renders the tubes or vessels agents in the propulsion of the circulating fluid. It is this property which the sensitive

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plant displays, when its leaves, on being touched, collapse, which the sunflower manifests as it bends to the refreshing light, or the night-folded blossom, expanding with the return of day.

In animals, we see this property residing to a wonderful degree, in the fibres of the muscles, whether the muscles be of the class termed involuntary, such as the heart; of a mixed character, such as those of respiration; or purely voluntary, as those of locomotion. Many consider the irritability of muscular fibres as depending immediately upon the influence of the nerves with which they are supplied, and not as an independent faculty. It is true, as is proved by experiments, that volition acts as a stimulus to the voluntary muscles through the medium of the nerves, for we can move a limb at pleasure, and that the agitation of the nervous system, from whatever cause it may arise, influences the action of the involuntary muscles, and even those of volition; but, nevertheless, there is in all this nothing contradictory of the opinion, namely, that irritability is an independent property of muscular fibre, since it is not annihilated by the cutting off of all communication between the nerves and the brain, or spinal marrow. If, for example, the heart of a frog be removed from the body, it continues its action for a considerable period, and even after it has apparently ceased, will repeat its contractions upon the application of stimuli. The same may be observed, also, in the heads of recently slaughtered animals; the ox, for example, in which, when skinned and hung up, the muscles may be observed contracting and relaxing, their movements vigorously responding to the application of stimuli.

But animals of the lower grade, in whose composition no nerves have been discovered, exhibit this property. It may be said that a nervous pulp, instead of being concentrated into a brain and system of filaments, is in these creatures diffused throughout the mass of their structure, and blended with it. Of this there is no proof; it is a simple assertion, a mere theory. It is allowed that no nerves exist in plants, yet in these this property exists. Some, it is true, have endeavoured to refer the movements of plants to mechanical or chemical powers, or to a vital orgism, as it is termed; but vital orgism, if it means any thing, means that property which we are considering, and for which it is merely another, and a more ambiguous term. As for the dependence of vital actions upon the laws of inorganic matter, we consider the theory utterly untenable. It was the opinion of Haller, that irritability is an independent quality of muscular fibre; and with his views we are disposed to coincide. Here, however, we shall leave the subject, having entered into it as far as is convenient for our present purposes.

As the vital power to which we have just alluded, call it by what name you please, is essential to the circulation of the fluids of the system, so is it by the same power that certain tubes are enabled to absorb particles of extraneous matter, carry these particles into the mass of circulating fluid, where they lose their original character, and become incorporated into the system. And thus is the drain upon this reservoir made good; for it is from this that every part of the frame or structure is elaborated; growth takes place at the expense of the fountain of life, and every loss and waste is repaired. We say loss, or waste, because while on the one hand the system is receiving an accession of particles, it is on the other rejecting or throwing off, by transpiration, particles which, having been integral parts of itself, are now useless: hence it may with truth be said, that no living body is, after a certain period, the same, particle for particle, as it was, though its identity remains. From this view, we shall be readily led to conclude, that a due proportion of aliment is required, in order that the loss be counterbalanced; and that where this is withheld, the body becomes emaciated, till at last the vital energies yield, and no longer maintain the vital contiguity of the organic structure. But in order to the growth of an organic body, the accession of particles must preponderate over the loss; and hence, from birth to maturity, there is not only a rapid circulation of the vital fluid through the system, depositing every where from its stores, but a rapid reception and assimilation of extraneous matter, and, accordingly, an unceasing demand for aliment. When maturity is attained, the balance is more or less equalized, according to various influencing circumstances; gradually, however, the reverse of our description takes place, the demands of the system for nutrition are less pressing, assimilation

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is less rapid, the circulating fluids are propelled less vigorously, and all the phenomena of life are languidly carried on. This decline, the harbinger of death, proceeds from the gradual exhaustion of the vital energy, an exhaustion we cannot account for; we call it a law in nature; but why should not the organic machine, having once begun, go on for ever? why should not the powers which conducted it to maturity, and enabled it to make good its losses and injuries, still continue in all their mysterious energy? Who can tell why? It is not so ordained; "the grass withereth, the flower fadeth," and "man goeth to his long home." Cuvier, indeed, makes the following observation: — "It appears, moreover, that life ceases, from causes similar to those which interrupt all other known motions, and that the hardening of the fibres, and the obstruction of the vessels, would render death a necessary consequence of life, as rest is that of every movement not occurring in a vacuum, when even the event shall not be forestalled by a multitude of extrinsic causes." There is something, however, beyond this rigidity of the fibres, this obstruction of the vessels. These must be themselves the effects of an antecedent cause, and will not bear to be compared to the phenomena produced by mechanical agents. In short, the bounds of the duration of living beings are prescribed by laws as certain, but as mysterious as those which determine form, or regulate growth. With the cessation of the vital principle, every phenomenon which distinguished between organic and inorganic matter ceases also. The outward form, indeed, may remain for a shorter or more protracted period; but it is now no longer under the influence of the laws of life; it is no longer a living thing. Its component particles are the subjects of another empire, they form new combinations, and become lost and mingled with the elements around us.

Death, then, is a necessary consummation of life, the goal to which it is inevitably hastening, the irrevocable destiny of organic existence.

Thus far have we endeavoured to embody, as concisely as possible, an abstract of the phenomena of vitality, phenomena to which inorganic matter exhibits nothing analogous; for whatever may be its mutations, or however it may be increased or diminished, every change an inorganic body displays is the result of extraneous agencies, and depends upon the laws of chemistry and mechanics. Hence, such a vital body discovers no vital bond in the aggregation of its particles; no vital action, however it may increase, and suffers no death, into whatever new combinations the particles composing it may enter.

In another paper we shall notice the distinction between plants and animals.

M.

THE STATE OF THE ABORIGINES IN BRITISH COLONIES.

To the Editors of the Visitor.

The sympathy of British Christians has been for many years excited on behalf of the negro slave, and we have almost forgotten the great mass of aboriginal inhabitants in our colonies, though at this time they need our particular attention. The dark deeds which have been committed in European colonies are perhaps altogether unknown to many of your readers, who may not even be aware of the state of the native tribes; yet it is a fact, which cannot be denied, that in every country where Europeans have obtained possessions, vice, misery, disease, and moral degradation have been the consequence; and the murderer has stalked abroad without a blush on his countenance.

I will not attempt to trace all the evils which the uneducated and barbarous tribes have suffered from an intercourse with Europeans; but I may mention one or two. Whether it is just for a civilized people to take possession of the lands occupied, by settled, or even wandering tribes, need not be discussed here; it is only necessary to consider what has resulted from this being done.

In all those places where Europeans have formed settlements, and even in those where the intercourse has been only casual, the number and violence of diseases have invariably increased. The depravity of the human heart has also been developed in most appalling forms; drunkenness, debauchery, and murder have been prevalent among the ignorant and idolatrous natives, ejecting that social and relative confidence which they before possessed. These, however, have not been the only evils they have suffered; for as soon as the civilized

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man, falsely so called, has succeeded in dispelling the fear which hung over his heart, he has commenced and prosecuted, with unremitting energy, a system of aggression, which only terminated with the diminution, and, in some instances, the extermination of the race. To prove that this is not an exaggerated statement of what has happened, you will permit me to make one or two extracts from the evidence given before the Aborigines' Committee of the House of Commons, and from other sources.

The Rev. J. Thomas, Wesleyan missionary at the Friendly Islands, writing from Tongataboo, says:—

"I wish to make a few remarks on a painful subject, namely, the ill conduct of masters of vessels and their crews at these islands. We have long been grieved to hear of the wickedness committed by our own countrymen who visit the Friendly Islands. It has spread its deadly influence far and wide, and presents an obstacle of no trifling importance to the extension of the gospel at many parts of this island, and is a constant stumblingblock to the infant church of Christ at this place. From what we have lately witnessed, we find that the evil complained of is increasing upon us, and the consequences have been most afflicting. I do not hesitate to say, that eighteen out of twenty of the accidents which have happened at these islands, have taken place through the depraved and wicked conduct of the crews, as they drink to excess, quarrel and fight among themselves, and insult and ill-treat the natives, especially the females, which leads to quarrels with the men, and sometimes with the heads of the people, who are not disposed to put up with such conduct from persons whom they can easily overcome. Designs are then formed to revenge the evils they suffer, which lead to murder and theft, to the great loss of property to the owners of vessels, the disgrace of our common Christianity, and the English as a people, and the ruin and disgrace of the perpetrators, as well as the injury of the mission and the natives generally. Another thing we complain of is, that captains of vessels leave their wicked and disorderly men at these islands, to our no small annoyance, and the injury of our people."

The Rev. J. Williams, missionary from the South Sea Islands, when questioned on the influence of the intercourse between the natives and Europeans, says, "With few exceptions, it is decidedly detrimental to the former, both in a moral and civil point of view. And in attempting to introduce Christianity among a people, I would rather by far go to an island where they had never seen an European, than go to a place after they have had intercourse with Europeans; I had ten times rather meet them in their savage state, than after they have had intercourse with Europeans."

The Rev. W. Ellis, secretary to the London Missionary Society, gave the following distressing particulars, to prove the depopulation of the South Sea Islands, and to exhibit the causes from which the decrease of number may be supposed to arise.

"The depopulation has been most fearful; but I am not aware that it is traceable to the operation of the cruelty of Europeans; it is traceable, in a great measure, to the demoralizing effects of intercourse with Europeans; the introduction of diseases, of ardent spirits, and of fire-arms. These results of intercourse with Europeans have produced a destruction of human life that is truly awful. When Captain Cook was at the Sandwich Islands, he estimated the population at 400,000. In 1823, when, with other missionaries, I made a tour of some of the islands, we counted every house in one of the largest islands, which is 300 miles in circumference, and endeavoured to obtain as accurate a census as several months' labour would afford; and there was not in the entire group of islands, at that time, above 150,000 people. That diminution is to be ascribed to the above causes, wars promoted by fire-arms, ardent spirits, and foreign diseases, and also to the superstitions of the people, the offering of human sacrifices. The practice of infanticide, which destroyed so many in the southern islands, did not prevail to any extent in the Sandwich Islands. Their wars were rendered far more destructive than heretofore, by their being possessed of fire-arms. Where both parties are possessed of fire-arms, the destruction is not so serious, but when one party only is possessed of fire-arms, and the other party not, it is almost murder. With reference to the South Sea Islands, the depopulation has been as serious. Captain Cook estimated the population of the island of Tahiti at

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200,000. I have reason to believe, from actual observation, that his estimate was much too high; but the ruins of former dwellings, which still spread over every part of the island, show that it must have been much more densely peopled formerly than it is now. When the missionaries first arrived, there were not more than 16,000, and after they had been there ten or fourteen years, such had been the extent of depopulation, from the introduction of European diseases, ardent spirits, and fire-arms, that the entire population was not above 8000, some supposed not even 6000. Since Christianity has prevailed among the people there has been a reaction; the population is increasing, and perhaps it has increased one-fourth since Christianity has been introduced. I do not ascribe the depopulation, which had taken place in the South Sea Islands, to overt acts of cruelty, but chiefly to the indirect operation of intercourse with Europeans."

From these statements, the substance of which has been reiterated by all who have examined the situation of the aboriginal tribes, and written on the subject, it is quite evident that the intercourse of Europeans with the uncivilized and unprotected tribes has, with few exceptions, introduced European vices and diseases, accustomed them to the use of ardent spirits and fire-arms, and consequently tended to the depopulation of the countries in which they had been placed by the providence of God. This is a fearful picture, but it is a faithful one, and not over-coloured. There are countries in which the native tribes have been absolutely exterminated, there are many in which their numbers have been lessened, and the remnant of the races plunged into the deepest misery and degradation, by the introduction of the most revolting of the European diseases. But where are we to look for an opposite and more pleasing picture? In what country have the natives been raised in the scale of civilization, and made happier and better, except in those few instances where devoted men have consecrated themselves to missionary labours? The blessing of God has, in many instances, pre-eminently rested on their exertions. The moral desolation at first presented to the Christian missionary, has been succeeded by the bright anticipation and evidence of a fruitful harvest; the evil passions and dominant prejudices of the wild, untutored man have been uprooted, and love to God, and peace and good-will towards men, have grown up in the hearts of individuals and societies. But who can tell how great has been the decision which urged the missionary forward in his determination to preach Christ and him crucified; or how bitter have been the tears he has shed over the follies and vices of his countrymen, which in a few days have destroyed the impressions he had for years laboured to produce? With what a grief of heart has he viewed the approaching sail of a vessel that carried his own countrymen, and with what jealousy has he watched the little community, reclaimed from the wandering and warlike habits of their forefathers, that was rising under his fostering care, and the blessing of God?

"It is not, then," in the words of the Report presented by the Parliamentary Committee on the Aborigines, "too much to say, that the intercourse of Europeans in general, without any exception in favour of the subjects of Great Britain, has been, unless when attended by missionary exertions, a calamity upon the uncivilized nations whom we have visited. We have seized their property; usurped their territory; thinned their numbers; impeded their civilization; debased their characters, and communicated little but our vices and diseases, and the use of our most potent engines for the subtle or the violent destruction of human life—brandy and gunpowder."

In every state of society, and among the most barbarous of the aborigines, there is a division of land. The people of every country are divided into sections or communities acknowledging a chief, and each section has a certain portion of land which it considers as its own property. When, therefore, this land is seized and occupied by the British settler, the natural proprietors are driven back, but instead of finding a retreat and home on the lands of their neighbours, are met in warlike attitude, and are in most cases exterminated by the combined hostility of their own countrymen and the European invader.

When this does not happen, a system of aggression and retaliation springs up between the natives and settlers. The native, feeling the injuries and indignities heaped upon him by the white man, is driven on, by the impetuosity of

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his passions, to revenge himself. This is soon found to be a fruitless effort; and, gradually sinking into supineness under the demoralizing influence of the vices to which he becomes the slave, he is at last viewed by the European as a creature whose life is of no more value than that of the beast which perisheth. To this feeling we must trace the cruel and savage treatment so often inflicted upon the unoffending native. I was informed by a credible person who had resided in New South Wales, that he had known instances in which the natives had been shot "in sport." And by another person we are assured, that their bodies frequently lie by the way-side, to be eaten by the native dogs, no one thinking it worth while to give them burial.

If such be the state of the aborigines in some of our colonies, the question now arises, What is to be done to relieve them from the circumstances in which they are placed? Efforts have been made to improve their civil and domestic happiness, by communicating general knowledge, and teaching them the arts, but all these have failed. There is but one means by which we can hope to accomplish these objects, and that is, by the diffusion of the Gospel. The affections must be changed before any permanent benefit can be obtained by the barbarian. The missionary must be intrusted with the work of civilization, as the herald of Christianity. But while he is engaged in the arduous work of preaching the gospel, and teaching the natives the great principles of Christianity, the system of intercourse now pursued by Europeans is diminishing their numbers by the introduction of vice and disease, as well as by overt acts of violence. From the co-operation of various societies, we may hope that, at no very distant day, the claims of the natives will be allowed, and the word of God having free course, Christ will be glorified in their conversion from idolatry to the service of the living God.

I am, dear Sir,
Yours ever,
Wm. M. H.

LEATHER, AND THE PROCESS OF TANNING.

The skins of animals have been long employed in the construction of clothing. We know that in an early age of the world, the human race were accustomed to construct their garments of this material; and many of the ignorant and debased aboriginal tribes of distant countries have not, to the present day, any other kind of covering. Now it must surely have suggested itself to every reader, that of all materials the skin of animals must be the worst for such purposes without some preparation. It is liable to a very rapid putrefaction, and, consequently, a fetid smell, which would render it exceedingly disagreeable to any wearer. Those people who have been, or are accustomed to use it, must, therefore, be in possession of some means by which the skin may be made fit for the comfortable use of man. The principal objects to be obtained are to prevent destruction by putrefaction, and to render the skin strong, tough, and capable of resisting water. This we do by a process called tanning; and when thus prepared, we call the skin leather. It will not be necessary to inquire into the nature of the methods probably employed by our forefathers, or to describe those adopted by uncivilized tribes in the present day: we may at once proceed to explain the nature and process of our modern tanning.

If we examine carefully the skin of an animal soon after it has been stripped from the body, we shall find it to consist of three parts. There is, first, the true cutis, which is a membranous substance, chiefly composed of gelatine, soluble in water. In this substance we may trace the various vessels which convey the several fluids of the animal body, and some part of their contents must of necessity remain in them. Then we have the outer or insensible cuticle, to which the hair, wool, or fur, is attached; both of which are chiefly composed of albumen, impenetrable to water, and almost incapable of putrefaction.

Now before we proceed to explain the methods of preventing the decomposition and putrefaction of the inner cutis of the skin of the animals, it will be necessary to make a few remarks on the chemical character of gelatine, the substance to which the decay may be traced, and of tannin, the substance by which it is prevented.

Gelatine, or jelly, is an abundant principle in the construction of the animal body. It is not only a component part of bony structures, but is abundant in the soft and white parts, especially in the skin. By boiling, the gelatine may be

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extracted from any of these parts of the animal body, in a transparent solution, and when gently evaporated, may be made solid, having that flexible tremulous character which distinguishes the jellies that are brought upon the table. By a still greater evaporation, the gelatine is rendered hard and brittle, and forms in fact the substance called glue. When in this state, gelatine may be kept a long time without any alteration of character; but when in a thin or liquid state, it soon putrifies.

The substance called tan, or tannin, has a strong astringent, and a particular taste. It is obtained from galls, catechu, oak bark, and many other vegetable substances. Now if a solution of gelatine, glue or isinglass, for instance, be added to an infusion of oak-bark, or galls, a copious white precipitate will be immediately thrown down, which has a smell precisely the same as that of well tanned leather. The compound formed by the union of gelatine and tannin is incapable of decomposition in water, and the liability of gelatine to undergo putrefaction is, when thus united, overcome.

The first process in preparing a skin is to remove all the animal juices contained in the pores of the cutis, and all extraneous substances, and in most cases to remove the cuticle and its hairy covering. Having thus obtained the pure skin in a state ready to imbibe any substance in which it is macerated, the process of tanning may be commenced. There are two ways in which the skins of animals may be prepared and made fit for some parts of human clothing, namely, tanning and tawing. In the former the skin is impregnated with the vegetable substance called tan; and in the latter made to combine first with alum and other salts, and afterwards with the white of eggs, or some other animal matter. The thick sole-leather used in making boots and shoes is tanned; the white kid-leather employed in the manufacture of gloves is tawed; and the fine Turkey leather is first tawed, and afterwards slightly tanned. Some tanned leathers are curried, that is, imbued by manual labour with oil. We must now proceed to state such general facts, in relation to each of these processes, as shall put the reader in possession of the most important information, without noticing those slight variations in the preparation of leather, upon the advantages of which even practical men may entertain a difference of opinion. It is to the principles and leading processes alone that we refer.

As soon as a skin comes into the tanning-yard, it is, as already stated, to be cleaned before any process of preservation can be commenced. The cuticle and the hairy covering is to be removed, and the cutis is to be cleansed from all extraneous subtsances. There are several ways in which this is done, regulated by the process to which the skin is to be afterwards subject, and the purpose to which it is to be applied. The thin skins of cows, calves, and other animals, generally used in the manufacture of flexible kinds of leather, and usually curried, are not prepared in the same manner as thick hides, such as those of the ox and the boar; the leather formed from which is commonly employed for the soles of boots and strong shoes.

The thin hides are prepared in the following manner. They are first thrown into a pit containing water, in which they are cleansed from all impurities. Here they are allowed to remain for a day or two, and are afterwards removed, and scraped upon a cylindrical stone called the beam, with a blunt knife prepared for the purpose. In this way, any of the flesh or fat that may adhere is removed. They are then thrown into a pit containing lime-water, in which they are macerated for many days, until the skin becomes hard and thick, and the cuticle and hair is loosened from the skin; the separation being made on the beam with a blunt knife. After this has been done, the hides are thoroughly washed, to remove any portion of the lime that may adhere to them, and then immersed in the mastering-pit, where they remain for several days, acted upon by a bath of water and a putrescent dung, such as that of pigeons, fowls, or dogs; that of horses or cows is unfit for the purpose. Of all the processes to which the skins are subject, none require so much attention as this; for by the action of this bath they are rendered soft, and if allowed to remain a few hours too long, their texture is entirely destroyed.

The thick hides intended for sole-leather are prepared in a different manner. After the skins have been thoroughly cleansed, as in the former instance, the cuticle and hair should be, if possible, removed without the process of liming; for lime, if retained in the skin, renders the leather liable to crack. This may generally be done, though the

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process already described is frequently practised. The most approved method is to roll the skins together in heaps in some warm place, where putrefaction may be aided. After remaining a few days in this state, the hair adheres less tenaciously, and may be easily removed. The next operation is called raising, and is intended to open the pores of the skins, so as to give the tanning liquor a more entire action upon them. They are, therefore, immersed for several days in some acid liquid: acetous acid, formed from an infusion of rye or barley strongly fermented, was used for this purpose: but now diluted sulphuric acid is much preferred, in the proportion of a pint of acid to about fifty gallons of water.

We come now to the process of tanning. In whichever way the skins may be prepared, the same method of tanning is adopted. From what has been already said, it will be evident to the reader that the process of tanning must necessarily be an extremely simple one; in fact, it consists of nothing more than the immersion of the skins in an infusion of tannin. The affinity of the gelatine and tan causes a gradual extraction of the tan from the water, and union with the skin. A hole, or pit, is formed, and when the infusion is prepared, the skins are thrown in, and continue exposed to the solution, only increasing the strength until the operation is completed. It is a process of great simplicity, though requiring constant attention, that every part may be alike exposed to the tanning principle. No advance in the arts can in any great measure aid the workman, a fact which accounts for the early introduction, or, at least, the universal use of this manufacture.

Oak bark is the only substance used for tanning in this country. The bark, when stripped from the tree, is first piled in large stacks, and is not taken to the tan-yard until ground into a fine powder. It is thrown into pits of water, with which the soluble parts are quickly united, forming what is technically called the ooze. The skins are first placed in a weak solution, and, after remaining in this for a time, in a stronger; and this increase of strength is continued until the operation is complete. In the preparation of the thick sole-leather, these successive immersions are not sufficient, for after being subject to many oozes of different strength, it is still found to be only partly tanned, which may be known by cutting the skin; the parts which have undergone the change present a brownish colour, and the others remain white. A partially tanned skin will therefore present the appearance of three distinct strata, the central part having suffered no change of colour. The thick hides after being partially tanned are placed in larger pits with alternate layers of oak bark, the oak being both the bottom and upper layer. A weak ooze is then poured in between the interstices, so that in a short time the skins are exposed to a saturated solution of tan.

It is here worthy of remark, that tan is not the only substance contained in vegetables, and capable of solution in water. The infusion of oak bark is known to contain gallic acid, and other extractive matter. All these unite with the leather, and may perhaps have some effect in the production of that change which the animal matter undergoes, for chemists are not acquainted with any method, by which they can extract tan alone. The presence of gallic acid in leather is easily proved; for any part which is touched with a salt of iron immediately turns black. From the experiments made by Davy and others, it appears that the colour and flexibility of leather is in a great measure due to the extract; and even the quantity of tan that is absorbed depends on its presence and amount.

Common calves' skins usually require from two to four months for complete tanning, sole leather from fourteen to twenty months, and a boar's shield about two years.

When the tanning is complete, the hide is taken out of the pit. Sometimes it is stretched upon a convex piece of wood called a *horse*, and beaten with a heavy steel bar; at other times it is passed through iron cylinders, a process which adds solidity to the leather, as well as effectually drives out nearly all the water it contains. When the larger quantity of fluid has been thus removed, the skins are taken to the drying house, and there remain exposed to a constant current of air till quite dry.

The method usually adopted of currying leather is very simple; and as it has probably been witnessed by many of our readers, a short description will be sufficient. The hide as it comes from

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the tan-yard is first immersed in water, and softened, and then placed on a smooth wooden beam with the fleshy side outward. With a sharp knife the currier, who is elevated above his work, pares off the inequalities, and reduces it to the required thickness. It is then washed and rubbed with a polished stone, and afterwards covered with oil, or a mixture of oil and tallow. When dry, the skin is fit for use, except that it is blackened on the grain side, by rubbing it with iron liquor, and on the flesh side with lamp black and oil.

It may here be mentioned, that in the preparation of thin skins, such as lambs' and goats', more care is required than in those of which we have been speaking. When prepared, they are subject to a variety of operations, such as tawing, dyeing, oil-dressing, and shammoying; but whatever process is to be adopted, that of tanning always precedes, except in the manufacture of white leather. These thin leathers are used for a great variety of purposes, such as bookbinding, the manufacture of gloves, coach and chair linings. It is not, however, necessary for us to detail the manner, in which the skin is prepared for tanning; for although in some respects different from that already described, in consequence of the great care required in manipulation, it is, in principle, essentially the same. When prepared, the skin appears an exceedingly thin white membrane, and is called a pelt, and is ready for any operation that may be required.

The method of tawing is as follows. The pelts are placed in a solution of alum and salt in warm water, and there allowed to remain until they have gained a sufficient toughness and thickness. They are then taken out and washed, and afterwards immersed in bran and water, where they ferment, throwing off much of the alum and salt previously imbibed, but at the same time retaining, it is supposed, a portion of alumine received from the solution. They are then dried and again soaked in water to extract still more of the alum; after which they are trodden in the yolk of eggs, until nearly all the substance of the egg is taken up, and a transparent liquid is left.

There are many kinds of leather to which we are unable to refer in this paper; but the principle upon which every tanning process is conducted has been so fully stated, that it will be quite evident, every alteration of character, or appearance must arise from either the addition or omission of some operation altogether independent of the preservation of the skin. The Russia leather, so valuable in this country for bookbinding, and other fancy purposes, is tanned in the same manner as our own leathers; but still we are unable to produce it with all our skill, although the method of manufacture has been frequently described by those who have resided in Russia.

THE SCENT OF WATER.

"For there is hope of a tree, if it be cut down, that it will sprout again, and that the tender branch thereof will not cease. Though the root thereof wax old in the earth, and the stock thereof die in the ground; yet through the scent of water it will bud, and bring forth boughs like a plant."—Job xiv. 7—9.

THERE is something inimitably tender and affecting in this comparison, which Job has drawn between the vivacious and reproductive powers exhibited in some departments of the vegetable creation, and the brittle texture of the human frame. What renders it so peculiarly touching is, that it was not made by an eastern writer indulging in a voluntary fit of heaviness beneath the shade of a fig-tree, to infuse a greater measure of pathos and interest into his composition, but by one who saw the work of destruction proceeding in his own body, which was rankling with boils and sores, from the crown of the head to the sole of the foot. But let us turn from a sentimental consideration of the words, and look at their physical truth and propriety; let us weigh them in the balance of philosophy, for they will bear it. If a tree be cut down, the stock will sprout again, through the scent of water. The word translated, "scent," might, with more aptitude for the present occasion, be rendered steam, or vapour, that is, moisture combined with a certain portion of heat. Nor is there any abuse of language in calling the exhalation which rises from a river at noon, and the odorous effluvia which is thrown from a plant into the air, by the same name; for in many cases a degree of moisture is mixed with the scented particles. This appears to be the reason why many flowers smell most in the evening, and others only during those hours. We should not be far from the truth in saying, that the little fragrant atoms are conveyed to the senses as they floated upon the wings of our invisible

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steam or vapour. We may hence assert with truth, that the sacred writer in calling a scent and steam by the same name, has done so with a very happy reference to philosophical propriety. We are accustomed to regard vegetables as nourished by the water which their roots imbibe from the soil, and as cheered by the warmth of the sun-beams. But the watery aliment which they absorb in the shape of vapour, is shown by many observations to be of the highest importance to their well-being. Gardeners, aware of this fact, keep not only the foliage, but the floors of their stoves and hot-houses constantly moist, and find by experience that this practice is more conducive to the health and vigorous condition of the plant than the mere watering of the earth about the roots.

In hot climates travellers often observe the most succulent plants thriving with every apparent comfort upon the most arid and sunburnt soil. In the parched deserts of Africa, where the quantity of rain in a century scarcely rises to the height of an inch, the most juicy vegetables are often found growing to an astonishing height. This scent of water, as our version has it, is constantly floating in the atmosphere, in a quantity which upon an average depends upon the heat of the climate, and is thus everywhere ready to allay the thirst of the weary plants; and which, whether it be condensed into showers and dew, or whether it glides unseen in the form of transparent vapour, ministers without partiality to the wants of the meanest plant that buds in the desert, and the cedar, that rears its stately crown in the midst of the forest. To enable the leaves thus to drink up the "scent of water," or vapour, for the benefit of the individual, the leaves have their surfaces opened by a countless number of minute slits, which offer a free passage into the cellular substance. These openings may be seen, by the help of a magnifier, in the leaves of the lily, and plants related to it, where they are of a much greater size than in many other tribes. In the leaf of the iris, which is now lying before us, they run in rows lengthwise, and in shape remind us of those small windows, or narrow openings, which light the stairs in towers of old country churches. Through these apertures the subtile tide of vapour ebbs and flows, according as the plant is in need, or has a superabundance of moisture. Here then we have an incidental allusion to three philosophical facts:—The existence of an invisible vapour, diffused throughout the atmosphere, which is the foundation of some of the most important phenomena that make up the science of meteorology; the suitability of this vapour for the nourishment of plants, which is proved by the observations of our daily experience; the existence of passages through which this vapour may find its way into vessels within the plant.

The Holy Scriptures, we know, were not intended to teach us the principles of natural philosophy, their aim being to teach mankind the doctrines of a species of knowledge infinitely more important, and which cannot be rightly understood without the special aid of that Divine Spirit by whose unerring guidance they were indited. Yet they now and then give us an indirect intimation that the Spirit who communicated them was familiar with many things, to the understanding of which we scarcely arrive after the laborious efforts of successive ages. If philosophers were to read the Bible with greater frequency and attention, it is not unlikely that they would sometimes find a hint, which, by being pursued and expanded, might be made to serve as the foundation of some important discoveries.

The scriptural reader is aware that the production of a grateful odour formed a considerable part of the service of the tabernacle. For besides the altar of incense, whereon the priest was directed to burn sweet incense every morning, Exod. xxx. 7, the meat-offering was accompanied with frankincense to perfume the burning of the meal, and the most odorous parts were selected from the peace-offerings and trespass-offerings, and fumed upon the altar; that is, burned for the purpose of yielding a fragrance, which was called a sweet smelling savour, or the odour of rest and appeasement. The fumes, as they ascended from the altar, were emblematic of life; and while they taught, in a well understood figure, that the life of man was forfeited, intimated along with it this lesson, namely, the importance of vapour in the functions of life. The foregoing observations show of what consequence it is in vegetable existence; and even in animals, we know, that besides the changes produced by the circulation of nutritious juices, there are

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some which depend on the existence of an unseen vapour.

In the act of sacrificing, there was a twofold confession made, that our life must be given up as the penalty of sin; first when the blood of the victim was poured out at the foot of the altar, and then again when the steam ascended from between the horns of that sacred structure; both of them being alike emblematic of life.

We must not be thought to have rambled from the matter in hand, because we began with a tree and have ended with an altar; for the same word עץ is used in the original on both occasions, and the explanation of a process alluded to in one case serves to interpret a symbol used on another. Nor needs the humble Christian be afraid lest our philosophy should lead him from the simplicity of the gospel, seeing that our exposition of an emblematic rite teaches us that we are but dead men in the sight of God. L.

PECULIARITIES OF THE BIBLE, IN RESPECT TO INTERPRETATION.

In establishing the principles referred to, p. 45, we must not forget two others which are equally important. They are these:—

1. The Bible has some peculiarities, which belong to no other book; and so far as these peculiarities are concerned, it has, and must have laws of interpretation in some respects peculiar.

2. The writers of the New Testament are inspired and authorized interpreters of the Old.

Still, the common laws of language are never violated, nor even encroached upon, by these peculiarities; but words and phrases are always used, which are appropriate to express the ideas intended.

The three following are the principal peculiarities of Scripture, to which I allude:—Relative Perfection — Prophecy —Typical Representation.

1. *Relative Perfection of the Bible.*

By this I mean a perfection which is not absolute, as God is said to be an absolutely perfect Being; but a perfection which has reference to some particular end to be secured. As the language of the Bible is human language, it cannot be absolutely perfect; but yet the language of the Bible is perfect as respects its adaptation to the end to be secured by it, namely, the religious education of man as a free, intelligent, accountable being.

So the Mosaic institutions were not in themselves the best possible, for Christianity is certainly better; but they were the best possible for the times and the circumstances to which they were adapted. They were not absolutely perfect; but perfect relatively to the end to be accomplished by them, namely, the preparation of the world for the gospel dispensation. The apostle declares, that "The law made nothing perfect, but the bringing in of a better hope did," Heb. vii. 19; and, that "The law was our schoolmaster to bring us unto Christ," Gal. iii. 24; and that "Before faith came, we were kept under the law, shut up unto the faith which should afterwards be revealed," ver. 23.

After we have proved the Bible to be a perfect revelation, in the sense above explained, we have two peculiar laws of interpretation, which apply to no other books.

1. We are not at liberty to censure the ends which God proposes to himself in the Bible, nor the means by which he accomplishes them; but we are simply to ascertain what those ends and means are.

2. We are not at liberty to infer real contradictions between the different writers of the Bible; but where there is an apparent contradiction, we are to suspend our judgment, investigate anew, and seek modes of reconciliation.

Neither of these rules, as is easily seen, affects the laws of language; but they merely regulate the inferences which we derive from meanings ascertained in the usual mode.

In regard to the apparent discrepancies and real diversities between the four evangelists, Chrysostom has the following judicious remarks:—"This very thing is the greatest proof of truth; for had they agreed with exactness in every point, even to time, and place, and very words, no one of their enemies would have believed that they had not been together, and written what they wrote by some human collusion; for so great symphony does not belong to simplicity. But now the seeming discrepancy in minute things, clears them from all suspicion, and strikingly vindicates the character of the writers. We think it meet that you should narrowly observe

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this, that in principles, and in things pertaining to life and doctrine, no one can any where find the least dissonance among them." (Preface to Matthew.)

2. *Peculiarities of Prophecy.*

If prophecy were merely anticipated history, we should need here no peculiar laws of interpretation; but this is not the fact.

The costume and the symbols of prophecy are altogether peculiar, and entirely different from the style and manner of pure history. See Matt. xxiv. 29; Acts ii. 19, 20.

Moreover, the prophets generally saw the events, which they described as actually transpiring before them, and were not told of them by narrative. They saw, in ecstatic vision, near events and remote in juxtaposition, in space and not in time, with the idea of succession merely, without exact chronology; as we see the stars in the firmament, all apparently at nearly equal distances from the eye; or as the towers of a distant city seem to the eye spread out on the curve of the horizon, and to rise from the edifices between them and the observer. Time is designated in but very few instances, and then generally in a very peculiar manner. Two of the most remarkable instances are the seventy years' duration of the Babylonian captivity, Jer. xxv. 11, 12; and the seventy weeks that were to precede the coming of the Messiah, Dan. ix. 24.

A careful observance of this principle will greatly aid in the right understanding of the prophets; and will show why they almost always speak in the present tense rather than the future. Examine the following passages as illustrations. Nahum sees the overthrow of Nineveh, and listens to the tumult occasioned by it. Nah. iii. 1—3. Isaiah sees the revellings, the surprise, and the sudden massacre of the Babylonians; Isaiah xxi. 1—9; see also verses 11, 12. So he sees the Babylonian king fall and go to Hades. Isaiah xiv. 8—12. Compare also Hab. iii. 3—12; and Rev. vi.—xii.

In accordance with this mode of prophetic vision, remote events of the same kind are often intimately conjoined, as though they were to occur in immediate connexion; and the prophets themselves could not always ascertain the time that was to intervene between them. See 1 Peter i. 10—12.

Thus Isaiah connects the coming of the Messiah and the millennium immediately with the Jewish deliverance from Assyrian oppression; Isaiah ix., x., xi.; compare Matt. iv. 15, 16; also the same events with the restoration from the Babylonian captivity, Isaiah xl. and the following chapters. The deliverance from Assyria was to take place, as the prophet well knew, two centuries earlier than the deliverance from Babylon; and he certainly knew that the coming of the Messiah could not immediately succeed both these events, yet he has joined this event to both the former, in accordance with the genius and constant custom of prophecy. For other examples, compare Joel ii. 28, with Acts ii. 17; and Zech. ix. 9, 10, with Matt. xxi. 5.

So Christ, according to the universal rule of prophecy, connects the day of judgment immediately with the destruction of Jerusalem, predicting the latter in Matt. xxiv., and the former in Matt. xxv.

In the prophetic peculiarities, also, it will be perceived, that there is no violation of the common laws of language. It is with the thoughts, and not with the words, that these peculiarities are connected.

3. *Typical Representations.*

God proposed the whole plan of revelation to himself from the first, and seeing the end from the beginning, made the old dispensation preparatory to the new, and prefigurative of it, Col. ii. 17.

This holds true in reference to prophecy. Sometimes one person or event is taken as the representative or type of some more remote and still greater person or event, and language is used in regard to both, the whole of which can be applied to neither separately. Thus in 2 Sam. vii. 12—16, (compare Heb. i. 5,) Solomon, the son and successor of David, and the Messiah—the Hebrew temple and the Christian church—are blended together in prophetic vision. To this peculiarity of typical prophecy Lord Bacon refers, when he speaks of a "latitude which is agreeable and familiar unto Divine prophecies, being of the nature of their Author, with whom a thousand years are but as one day; therefore they are not fulfilled punctually at once, but have springing and germinant accomplishment throughout many ages, though the height of fulness of them may refer to some one age." *Advancement of Learning*, b. ii. In this way many of

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the Psalms are obviously understood by the writers of the New Testament as having a twofold reference.

See Psalm xvi. compared with Acts ii. 25—31, and xiii. 35. Psalm xxii. 18, compared with Matt. xxvii. 35. Psalm viii. 4—6, with Heb. ii. 6, 7. Psalm xlv. 6, 7, with Heb. i. 8, 9.

This principle of one person being taken as the representative or type of another, is so clearly recognised in the Bible, that even the proper names are sometimes interchanged. Thus John the Baptist is called Elijah, Mal. iv. 5, compared with Matt. xi. 14; and Christ is called David, Ezek. xxxiv. 23, 24.

Events as well as persons may be typical, and prophecies be uttered respecting them in the same way, Isaiah vii. 14—16, compared with Matt. i. 22, 23.

This twofold reference of prophecy might sometimes be obscure, or even unknown to the prophet himself. See John xi. 50, 51.

It was a Jewish principle, that nothing would occur under the new dispensation, which had not its corresponding outline in the old; and as to the Hebrew priesthood and temple, we have the best evidence for asserting, that they were in all their details prefigurative of the different parts of the Christian system, Heb. ix. 1—22.

Indeed, I do not see how any one, who admits that the writers of the New Testament are inspired and authorized interpreters of the Old, can deny that there is frequently a twofold reference in the predictions of the Old Testament, and a typical meaning in its institutions. The extravagances of double sense, allegories, and types, surely, constitute no sufficient reason for the rejection or the concealment of a plain matter of fact.

The best rule which I have seen for the interpretation of types, is the following, selected from "Bishop Marsh's Theological Lectures," Part iii., pp. 113 and 117. "To constitute one thing the type of another, as the term is generally understood in reference to Scripture, something more is wanted than mere resemblance. The former must not only resemble the latter, but must have been designed to resemble the latter. It must have been so designed in its original institution. It must have been designed as something preparatory to the latter. The type, as well as the antitype, must have been pre-ordained; and they must have been pre-ordained as constituent parts of the same general scheme of Divine Providence. It is this previous design, and this pre-ordained connexion, which constitute the relation of type and antitype. Where these qualities fail, where the previous design and pre-ordained connexion are wanting, the relation between the two things, however similar in themselves, is not the relation of type and antitype. "For example, Cardinal Bellarmine supposes that the Protestant secession under Luther was typified by the secession of the ten tribes under Jeroboam; while the Lutherans, with equal reason, retorted, that Jeroboam was a type of the pope, and that the secession of Israel from Judah typified, not the secession of the Protestants under Luther, but the secession of the church of Rome from primitive Christianity. But to whichever of the two events the secession under Jeroboam may be supposed the most similar, if similarity exist there at all beyond the mere act of secession, we have no authority for pronouncing it a type of either. We have no proof of previous design and of pre-ordained connexion between the subjects of comparison: we have no proof that the secession under Jeroboam was designed to prefigure any other secession whatever."

The Old and New Testament both abound with historical illustrations, which are often confounded with typical representation, to the great hinderance of a right understanding of the Bible. To give a few examples:—

1. Particular facts illustrate general principles. Deut. xxv. 4, compared with 1 Cor. ix. 9, 10; Psa. xcv. 7—11, compared with Heb. iii. 7—19.

In this way the whole Israelitish history may illustrate individual Christian experience.

2. Events illustrate events. Judges vii. 22, compared with Isa. ix. 4; Numb. xxi. 9, compared with John iii. 14; Exod. xiv. compared with Isa. xliii. 16, 17.

3. Like circumstances are expressed in the same language. Isa. xxix. 13, compared with Matt. xv. 8; Jer. xxxi. 15, compared with Matt. ii. 18.

These, and others of the same kind, are neither types nor allegories, but simply historical illustrations; like that of Luther, when he exclaimed to his desponding followers, "What! because you are embarked in the same ship with

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Christ, do you expect a fair wind and smooth sea all the way? Nay, rather look out for storms and jeopardy, and that too while your Master is asleep!" Compare Matt. viii. 23—27.

In all these cases, the language is plainly to be interpreted by the common laws of language; and the *things* only are typical or illustrative.

In regard to types and allegories, we know of none, excepting those which are explained as such in the Bible itself. All the rest are merely conjectural, and, though often ingenious, are worse than idle, leading the mind away from the truth, perverting it by false principles of interpretation, and making it the mere sport of every wild fancy.—*C. E. Stowe.*

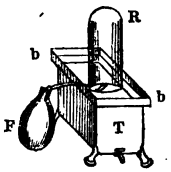
THE PHILOSOPHY OF COMMON THINGS.

COAL GAS.—NO. 2.

The gas obtained from the distillation of coal, in an iron retort, is a mixture of carbureted hydrogen with hydrogen, carbonic acid, nitrogen, and sulphureted hydrogen gases. These are mixed in various proportions, the quantity of each depending upon the nature of the coal employed, and the manner in which the heat is applied. Before we proceed to describe the manner in which the coal gas is manufactured, it will be necessary to explain briefly the nature of the several kinds of gases of which it consists.

Hydrogen gas.—To obtain hydrogen gas, pour sulphuric acid, diluted with about five or six times its weight of water on small pieces of iron, such as iron turnings or nails. The gas will be immediately given off, and may be received in any glass vessel provided for the purpose. The gas may also be obtained, and in a state of greater purity, by using zinc instead of iron; but in this case the sulphuric acid should be diluted with eight parts of water.

The reader may, if he pleases, make many of the gases, and be ready for performing experiments on them by the use of a very simple apparatus, which will cost but little money. Take a thin glass flask, and, having fitted it with a cork, in which a hole has been cut, insert a piece of tobacco-pipe. When the materials for making the gas are placed in the flask, fix the cork in its place, and cover it over with some plastic substance: putty or clay will generally answer the purpose. As the gas rises, it must be received in some glass vessel, so constructed that it will be easy to make experiments with it. A gas receiver is the best suited for this purpose, and may be obtained either with a glass stopper or a cork. This will cost little money, and is the only expense that will be incurred. Most of the gases are collected over water; those that are absorbed by that fluid must be received over mercury, and then the apparatus is expensive. When gases are collected over water, a tin vessel, called a pneumatic trough, is used, but a small tub or pail will serve the purpose as well. Take a small piece of board, as wide as your receiver, and, having cut two or three holes in it, let it be fitted into the tub or pail, and the gas apparatus will be complete. It is shown in the accompanying drawing. T is the tub; b the board, with



holes, placed across it; R the receiver; F the flask. We have now to form hydrogen gas. To do this, we must first place in the flask some pieces of zinc, and pour upon them the diluted sulphuric acid. A cork, with a pipe fitted to it, is then fixed into the neck, the opposite end being put into the water so as to rise towards that hole over which the receiver is to be placed. We must now remove the stopper of the receiver, and plunge the vessel into the water, which expels all the air, and fills it. The stopper being fixed in its place, the vessel may be removed to the board, for the water being supported by atmospheric pressure will still remain in it. When the chemical action between the zinc and sulphuric acid has been going on long enough to expel all the atmospheric air in the flask, the end of the tube may be brought under the hole, and the bubbles of gas will rise into the receiver, expelling the water. In making hydrogen gas, it is particularly necessary to exclude the atmospheric air, for when the two gases are united, a most explosive compound is produced.

Hydrogen gas has a disagreeable smell, is the lightest of all gases, is fatal to ani-

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mals, and, though inflammable itself, extinguishes burning bodies. The following experiments may be made upon it; but great care must be taken that there is no mixture of atmospheric air, for if this happen, an explosion will be produced when a light is brought near.

1. Take a small bottle containing hydrogen, and let it stand with its open mouth upwards for a few minutes, and when a lighted taper is introduced, the gas will be found to have escaped, and atmospheric air to have taken its place. This shows that hydrogen gas is lighter than atmospheric air.

2. Fill a small bladder, having a stopcock and brass pipe, with hydrogen; press upon the bladder so as to force out the gas, and bring a lighted candle near it. The gas will immediately take fire, and burn with a pale feeble flame. This proves the inflammability of hydrogen, and its applicability as an artificial light.

3. Burn the hydrogen, as in the last experiment, in a glass tube, and musical sounds will be produced, the pitch being regulated by the form of the tube.

Carbureted hydrogen, sometimes called heavy inflammable air, is obtained by purifying coal gas. It gives out more light than hydrogen, and burns with a yellow flame. If the bottom of a pond be stirred up, this gas will rise to the surface, and may be collected in an inverted jar.

Nitrogen gas is one of the constituents of atmospheric air, and may be obtained in the following manner. Put a paste, consisting of iron filings and sulphur, mixed with water, into some vessel, and over it invert a jar, containing atmospheric air; after this has stood for a time, the water will begin to rise in the receiver, and in two or three days the whole of the oxygen will be absorbed, leaving a quantity of nitrogen equal to about four-fifths the volume of the air. The following experiments will illustrate its properties.

1. Plunge an ignited taper into the gas, and the light will be immediately extinguished.

2. Animals cannot breathe it. This fact the reader will not attempt to prove if he has formed a suitable estimate of the value of animal life.

3. If four parts of oxygen be mixed with one part of nitrogen, a compound will be formed resembling atmospheric air, and having all its properties.

Sulphureted hydrogen may be made in the following manner. Take some powdered sulphuret of antimony, and pour upon it about five or six times its weight of muriatic acid. When heat is applied, the gas will be given off in large quantities. It is remarkable for its extremely offensive smell, much resembling that of putrid eggs. It is inflammable, and burns silently when not mixed with atmospheric air. No animal can live in it for a minute; and it is stated that a bird died instantly in an atmosphere which contained only one part in 1500 of the gas.

Coal gas is produced by a dry distillation of coal in an iron retort. In its composition and properties, it is extremely variable. The fœtid smell it sometimes has, arises from the presence of sulphureted hydrogen. The carbureted hydrogen is that which is produced in the largest quantities of all the gaseous compounds. Beside these, tar is formed from the bituminous matter, and a vapour containing ammonia. The residue, after the process of distillation, is the substance called coke. When gas lighting was first introduced, it became a question of great importance to determine the manner in which coal would be best applied to a source of heat, so as to produce the largest quantity of gas of a kind well suited to yield a light of great intensity. The experiments then made proved that the results required were best obtained when the coal was spread in layers, and in comparatively small quantities.

The vessels in which the coal is distilled are called retorts. They are generally of an elliptical form, composed of cast-iron, and about six feet six inches long. These retorts are so set in brickwork, that the greatest possible number may be heated equally by the same fire. Mr. Perks, who obtained a patent in 1817, for his plan of setting retorts, proposed to place twelve in a circle, with one in the centre. The methods now adopted are generally modifications of this. Before the coal is put into the retort, a fire is lighted, and the retort raised to a proper temperature. The coal is put in with an iron semi-circular scoop, and then spread evenly over the bottom, each retort taking a charge of about one bushel. When this has been done, the mouth, or open end of the retort, is closed with a cover, which is fitted closely, and afterwards luted, so as to prevent the escape

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of any gas. To each retort an iron tube is fixed, and this is connected with a large cast-iron cylinder, fixed in a horizontal position at the front of the brick-work, in which the retorts are set. The gases and vapours, as they are formed, are carried away by the pipes into the hydraulic main, which contains a quantity of cold water to condense the vapours arising from the coal. As the gas passes through the water, some of its impurities are condensed, especially a portion of the tar and ammonia connected with it in its first formation. To one end of the main, and above the level of the water, a pipe is attached to carry the gas; and this is connected with a vessel called the condensing apparatus, where the tar brought from the main is still further condensed. Nearly all the ammonia is disposed of in the first vessel, on account of its strong affinity for water.

From what has been already said, it will appear important to the reader that such a degree of heat should be given to the coal in the retort, as shall be sufficient to throw off all the substances capable of vaporization. If the heat be too little, the volatile substances will not be entirely disengaged; if too great, the quality of the gas will be impaired, and the retorts injured. When the distillation has ceased, the residue, which is coke, must be taken from the retorts, and a new charge be put in. The hydraulic main may at the same time be emptied, the tar being carried away by a pipe employed for that purpose.

When the gas is first disengaged from the coal, its temperature is of course very great. Before any portion of the impurities can be condensed and thus separated, it is necessary to reduce its temperature. This is partly done by the hydraulic main, but not effectually, and is therefore carried into the refrigerator, or condenser. This apparatus consists of a large tank, which is fitted up with a series of pipes; the space between the pipes being filled with cold water, so that the gas in its progress has to pass over a continued cool surface. The tar is thus deposited at the bottom, and is conveyed by another pipe to a reservoir called the tar vessel. To this is fitted a number of cocks above each other. By the lower ones, the tar, which is heavy, and sinks to the bottom, may be drawn off; by the upper, the ammoniacal liquid.

From the condenser the gas is carried by another pipe, fitted to the top of the vessel, into the purifier. When gas was first introduced as a means of illumination, there were many objections to its use, arising from its impurity. It was found that the copper pipes conveying it from the gasometer to the burners were rapidly corroded; that bright metallic articles in the rooms where it was burned were exceedingly tarnished, and that an unpleasant and unwholesome atmosphere was produced. These objections were so powerful, that the importance of discovering a means of purification was evident to all who studied the subject. Dr. Henry made some observations in the year 1805, and stated, in a paper written at that time, the influence of lime water in purifying the gas from sulphureted hydrogen. It is thus effected:—The vessel in which the process is carried on is formed of cast iron, and is divided into several chambers, so formed that the gas must pass through a considerable quantity of lime and water, the liquid being kept in constant motion. The sulphureted hydrogen and carbonic acid are taken up in consequence of the chemical affinity subsisting between the substances. It is sometimes thought necessary to have two or three purifiers, as the separation of the volatile substance with which the gas is connected must be an object of the greatest importance.

After the gas has been submitted to all these means of purification, it is conducted into a large vessel, generally of a circular shape, called the gasometer, from which it is forced into the mains. The gasometer is of a form resembling two tubs, the smaller of which has its open end downwards, and falls into the larger. The lower part of the gasometer is fixed in the ground, and is made several inches larger than the upper, which is formed of wrought-iron, and suspended by weights, passing over pulleys, and exactly balancing it. The lower cistern, or vat, if we may so call it, is filled with water, and the upper one sinks into it when there is no gas; but as the process of manufacture goes on, the moveable part is raised, the gas being prevented from any escape by the water on which it rests. When a greater pressure is required to fill the mains, and produce a more intense light, it may be easily applied.

One pound of coal is supposed to yield about twenty-four gallons of gas; but this depends upon circumstances. Some

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kinds of coal yield much more gas than others, and the manner in which the heat is applied will make a great difference. Gas is also sometimes formed from oil, but of the process it is not necessary to speak, as we have so fully described the nature and manufacture of that produced from coal, and the advantages derived from its use. The prejudices which at one time prevented its adoption have died away, and now it is but seldom that persons take the trouble to think about it. A few years since it was objected to from a fear that it was dangerous; and now the same parties employ it without any more knowledge than they had at first. Ignorance is as often the parent of dangerous confidence as of unmanly fear. When confidence is not founded on knowledge, it often leads to dangerous presumption and foolish carelessness. We shall not therefore have written in vain if we have given our readers a reason for the opinions they form, and have cautioned them against the dangers to which they may be exposed.

THE COVETOUS SHOEMAKER.

Now, sit all round, as quiet as though you were trying to hear the flakes of snow fall on the ground, and I will tell you a tale—yes, a very entertaining tale; and, hark ye! if you do not contrive to learn a capital lesson from it, I shall say that you are not half so ready to get wise as to get into mischief.

If there be one sin more than another that hardens the heart, and renders it selfish and cruel, it is the sin of avarice. The Bible says, and says truly, that "the love of money is the root of all evil."

In a very pleasant village in Somersetshire, lived an honest, hard working shoemaker, of the name of Michael Dale; and if ever there was a modest, tidy, industrious, and well-meaning woman in the world, it was his wife Mary. Michael Dale's cottage stood pleasantly on a rising ground, on the back of which, about twenty yards off, ran a murmuring brook, with willow-trees growing on each side of it. He had two or three hives of bees in his garden, so that on a summer's day, when the wind was stirring, what with the rippling of the water, the rustling of the waving willow-trees, and the hum of the bees, there was music for Michael Dale and his wife Mary all day long.

Joe Danks, who looked after farmer Breedon's horses, was noted for being an early riser; but many a time when Joe passed by on his way to the lower-meadow, Michael's hammer was ringing on his lapstone, and Andrew Baker, the exciseman, who lived across the way, used to sit up later than most folks reading, and yet often, when Andrew went to bed, Michael was working away like a Briton with his awl and his wax-ends.

There seemed but one thing wanted to make Michael's cottage the very abode of happiness. Mary was pious, but Michael, though a well-meaning man, followed not after the things that belonged to his peace.

Oh how deceitful is the human heart! and how constantly ought we to pray that we may not be led into temptation, but delivered from all evil!

It happened that Jonas Horton, who was no better than serving-man at the Malt Shovel, had two hundred pounds unexpectedly left him by a relation of his who died at sea, and it was reported that Jonas had a dream about it, before it took place. From the very moment that Michael Dale heard that Jonas had had a dream, and that it came true exactly, and he was made master of two hundred pounds, Michael was an altered man. The love of money filled all his heart. Nothing would do for him but to dream just as Jonas did, and for the money to come in like manner; for there was a cousin of his who had been at sea for many years; so that hour after hour was spent in idleness, thinking that perhaps a dream and a bag of money would make him a rich man at last.

What a trouble was this to his wife Mary, to see her industrious husband become an idler, and to hear her neighbours foretell that he would be sure to come to the parish workhouse at the rate he went on.

There was one neighbour that bore with him, and advised him to alter his course; and that was Joseph Stanley. Joseph was a humble Christian man, and much respected Michael and his wife, and had tried hard to convince the latter to attend to divine things; but as Michael got more idle and poorer, he got prouder, and told Joseph Stanley that he wanted neither his advice nor his company.

There was a spot in the garden from which could be seen the turnpike road for nearly half a mile, and on the bench

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that stood there Michael was foolish enough to sit idling his time by the hour, trying to persuade himself that among the people who came along the turnpike road, his cousin would one day be seen, or, at least, that a letter would be sent by him, to tell him of the riches he had got together.

Michael's customers forsook him, one after another, as he neglected his work; he lost his cheerfulness, his clothes got shabby, and he became hasty and ill-tempered. All this time Mary, his wife, offered many a fervent prayer for her altered husband.

Things went on thus, until it was pretty plain that they could not go on so much longer, for Michael had run up a score at the huckster's, and at the Malt Shovel, that he could not pay, and his rent was getting sadly behind hand. Had Michael listened to the counsel of his friend Stanley, or to the affectionate entreaties of his wife, it would have been better for him; for then he would have been both "diligent in business and fervent in spirit;" but no, he gave himself up to covetousness; the love of money had entered into his soul.

Now, most likely, you are blaming Michael Dale for his wickedness and folly, and thinking how differently you would have behaved in the same situation; but "the heart is deceitful above all things," and the seed of covetousness is in yours. Have a care then! look to yourselves! and especially look to Him who alone can cleanse our hearts from evil, and give them the unsearchable riches of his grace.

Every day, and every night, Michael talked with his wife about his cousin at sea; for he had quite persuaded himself that it was impossible to remain so long at sea without getting a fortune, and also that it was much more likely for his cousin to leave his money to him than to any other relation that he had in the world. Poor Mary reasoned with him about the folly of living in idleness, losing his business, and getting a bad name among his neighbours, in vain: it only made him the more obstinate in his foolish course.

One night he went to bed fuller than ever of his vain expectations. His head was hot and his pulse feverish; no wonder that in such a state he should dream of that which occupied his thoughts. He dreamed, that as he sat in the garden, he saw his cousin coming along the turnpike road, at a distance, with two or three others; he was loaded with money, and no sooner did he meet him at the garden gate, than he threw it all down at his feet.

This dream made him half crazy with joy; Jonas Horton's dream came true, and why should not his? His wife, Mary, only sighed when he told her about it; for she well knew that neither the huckster nor the landlord were likely to get their money so long as her poor husband gave way to the covetousness and sin that did so sadly beset him. It had been many a day since Joe Danks, in going for his master's horses in the morning, had heard the sound of Michael's hammer and lapstone, and quite as long since Andrew Baker, the exciseman, went to bed leaving Michael busy with his awl and wax-ends.

No sooner had Michael swallowed down his miserable breakfast, for as he did little or no work, his wife could not provide for him the comforts she used to do, than he betook himself to the little bench in the garden to watch for his cousin.

Scarcely had he taken his seat when Joseph Stanley came up to the hedge, but he turned round and would not see him, so proud had the belief in his good fortune made him. When left alone, he thus began to talk to himself: "I wonder what my wise neighbours will say now; they have all along taken me to be no better than a fool, but I fancy they will alter their opinion when they know of my riches. They would have had me work like a negro all my days, sitting in my stall, and hardly getting bread and cheese. Let them work if they like it, but Michael Dale has a spirit above slavery. Joseph Stanley, forsooth, must counsel and advise me just as though I was a child, but I will now let him see that I am company for his betters. My wife, Mary, too, she must take upon her to find fault with me. I suppose now she will see her mistake! I'll not let her touch a sixpence till she confesses her folly."

In this manner the silly shoemaker went on to himself; so much had the love of money disturbed his judgment. Mary had told him over and over again, that "Better is little with the fear of the Lord, than great treasure and trouble therewith," and that "Godliness with contentment is great gain;" but he only turned on his heel and snapped his fingers in defiance of what she said.

As Michael Dale sat on the garden

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bench, with his eyes wishfully fixed on the road, he saw two or three figures in the distance, and one of them looked like a sailor. Jumping up from his seat, he called his wife. "He is coming! he is coming!" cried Michael Dale; and no sooner did his wife join him, than he pointed out to her the sailor-like figure, and the other. As the two men came nearer, it was very clear that one of them was drest in a sailor's jacket and trowsers, and that he carried a wallet on his back. "That is him," cried out Michael Dale, "I know him by his walk, I could pick him out among a thousand." Poor Mary was a little staggered, and never having seen her husband's cousin, she almost thought he was coming in reality; but soon after the sailor and his comrade passed by, without so much as looking at them. They were strangers, and Mary Dale saw by their ragged clothes that they had no wealth to part with. This was a sad damper to Michael Dale; but too obstinate to give up his foolish expectation, he once more seated himself in the garden, and his wife returned to her sewing. In half an hour's time Michael Dale once more cried out for his wife, who came, very unwillingly. "Look! look!" said he, "you can't say that is not him! There he comes, with a great bag of money across the back of a donkey." Mary stood hesitating what to say, thinking her husband almost out of his senses, and guessing, pretty well, how the matter would turn out. Alas! alas! it was only Jim Brookes, taking a bag of coke, on a jackass to the limekilns. Once more Mary went into the cottage, and once more Michael sat down on the bench.

When once sinful desires lay fast hold of the mind of a man, no one can tell how far they will lead him. One would have thought that Michael Dale would have been convinced of his folly; but no, he was as much led away as before. His disappointments only seemed to increase his covetousness. "Wife! wife!" said he, calling out louder than before, "come this once, and if I am wrong—but I know that I am not—if I am wrong, never believe me again."

"What is the use of my coming?" replied his wife, making her appearance at the cottage door; "what is the use of my idling my time with such whims as you get into your head? If I do not work, and work hard too, we shall be without bread."

"I tell you, hussy," cried Michael Dale, reddening with anger, "that my cousin is yonder, that is him with the bundle. I am as sure of it as though he stood in the garden."

Mary looked, and saw two men, one of them, who carried something in his hand, seemed to hang back, and almost to hide himself under the hedge, while the other came on before.

"Ay! ay!" said Michael, "he may creep under the hedge, but I can see as clear as a hawk. I knew him the moment he came in sight."

Mary was almost shaken in her belief to the contrary, so confident did her husband appear. In five minutes a strange man came up to the garden-gate, and inquired if one Michael Dale lived there?

"Yes! yes! you are right enough," said Michael; "come into the cottage, for I know very well who is coming after you."

Almost out of his wits with delight, Michael rubbed his hands, saying to his wife, "What do you think of it now?" and then led the way to the cottage, followed by the strange man; but scarcely had he turned round again to the door, when he was met, not by his cousin, but by James Muggins, who was sent by the landlord to seize on his goods for the unpaid rent. You might have knocked down Michael Dale with a straw. All his golden dreams were gone. He sat down on a chair, saying that he was a ruined man; hid his face with his hands, and sobbed till the tears trickled through his fingers.

Perhaps you are thinking that this was one of the worst things that ever happened to Michael Dale; but if so, you are much mistaken. On the contrary, it was one of the very best things that ever occurred to him in all his life. It pleased God to humble his heart by this sudden trouble; to convince him of the sin of covetousness, and to show him the wisdom of inclining his heart to His testimonies, "and not to covetousness."

When God blesses an affliction, we may say of a truth, "Blessed are they that mourn, for they shall be comforted." Oh what a great blessing is a kind-hearted, forbearing, forgiving, pious wife, in a season of calamity. No sooner did Mary see that the heart of her husband was really humbled, than she began to comfort him. She said that things were not so bad but that they might be

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mended, and putting on her bonnet, away she went to Joseph Stanley.

Say what you will of friends, but there are no friends like Christian friends. Joseph Stanley went back with Mary Dale to her husband, lent Michael enough money to pay the rent; spoke kindly to him, and so far encouraged him, that Michael, with a chastened and grateful heart, acknowledged the sin he had fallen into, and began in earnest, looking above for a blessing, to try if diligence in business, and fervour of spirit, would not gain him once more the respect of his neighbours, and afford peace to his own heart.

Seldom after that was Joe Danks up so early as Michael, and hardly ever did Andrew Baker read longer at his books than Michael Dale worked at his lapstone. Cured of covetousness, and humbly committing himself and all that he had to his heavenly Father, he lived and died an humble disciple of Jesus Christ, leaving this world with a bright hope of a happy immortality.

Beware of covetousness! for it finds its way into every heart; whether you have yet discovered any traces of it or not in yours, it will do you no harm to remember this account of Michael Dale.

A WILD BOAR.

A PARTY left Calcutta in a boat, on a December morning, for the purpose of shooting wild ducks. They proceeded down the Hooghly, and the tide being against them during the early part of the day, their progress was slow. On the second morning, instead of striving against the current, two of the party determined to land on the low marshy bank of the river, to beat the cover for snipes. One of the gentlemen, however, soon got tired, and returned back to the boat; and the other, while pursuing the sport, espied a green pigeon in a bush, which overhung the long thick grass surrounding him on every side. He fired, and the bird dropped. His single attendant ran forward to bag the game, but was arrested in his progress, when within a few yards from the tree, by perceiving that he had been anticipated by a wild boar; who, having taken up a station beneath its shade, was now making a slight repast upon the dead bird. The boy turned back, in the greatest alarm, to acquaint his master with the circumstance, who by this time had reloaded his gun. The report which he brought was verified by an audible grunt from the grizzly brute himself; and the former charge being replaced by a ball, the operation was scarcely completed before the hog came out from among the grass and rattans in which he had been concealed, and took up a position in a narrow path, a few yards only from the place in which the gentleman and his servant were standing. To see and be off was the work of a moment with the latter.

The boar grunted and foamed, but did not choose to become the aggressor; so, after eyeing his new acquaintance for some minutes, he turned about to resume his old quarters. An opportunity like this was deemed to be too good to be lost, so at that moment in which the side was fully exposed, the leaden contents of the gun were lodged in it, and the wounded animal tumbled over on his side, the blood flowing in a copious stream from an orifice near the shoulder. Running up to the game as it lay motionless upon the ground, the sportsman began to consider how he might best convey it to the boat, in order that the cook should, without loss of time, employ his skill upon the different joints. The current of his thoughts was, however, destined to undergo a serious change. When within five yards of each other, the supposed lifeless boar jumped on his legs, and charged furiously at his assailant. Flight, if such an alternative were contemplated, was out of the question, for the path being narrow, and the grass and rattans on either side extremely high, an escape could not be effected in that direction. It became necessary, therefore, to engage in a personal conflict, and seizing the gun by the barrel, the sportsman wielded it aloft in the air, and as the bleeding monster came on, dealt a blow upon the head, by which the stock was shivered, and the barrel forced out of the hand. The shock proved sufficient to stun the boar; and now, being without any means of defence, the assailant jumped over the body of his foe, and ran for his life. He had not proceeded more than fifty paces, before he espied the boar a second time up, and in search of him. In another instant he was giving chase, and notwithstanding the quantity of blood which had oozed away, was coming along at a fearfully rapid rate. To facilitate his flight, by lightening himself of every encumbrance,

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our friend threw off his coat, and strained every nerve to keep ahead. The exertion proved unavailing; the hog gained upon him rapidly, and a few yards alone divided the pursuer from the pursued.

Human strength had yielded to the efforts made in self-preservation; the tongue, dry and fevered, clave to the roof of the mouth, and all hope of a successful issue to the adventure seemed at an end. At that moment, a small mango tree, a few paces off the path, inspired the fainting man with new hope. The hog was not more than three yards in the rear, and, making a desperate effort to reach this place of refuge, he seized a branch, and was in the act of swinging himself into the tree, when the enemy came and caught him by the trowsers. The cloth fortunately gave way, and though pulled down, the sportsman was enabled to baffle his inveterate assailant, by jumping round and round the tree. After practising this manœuvre for some time, a favourable moment having presented itself, he took a leap, and gained what he considered to be a safe position among the boughs. This, however, proved only a temporary asylum. No sooner did the boar comprehend the circumstances of the case, than with truly piggish perseverance, he resolved to have his enemy down. The tree unluckily happened to be a very young one, and the hog rushing at it, employing his head as the battering-engine, it went over into the gully or ditch beside it, the hog and the man at the same time rolling pell-mell amongst its branches. Happily, the former got uppermost, and seized his grizzly antagonist by the throat. The animal struggled to free himself, but the efforts were ineffectual, the weight of his enemy's body, pressing heavily on the carcase, caused the blood to flow from the gun-shot wound, rendering the dying struggles weaker and weaker. In the course of a few minutes a slight jerking of the limbs alone indicated the determination of the conquered boar to resist to the last, and death speedily closed the scene.

The exertions made by the victor had been so desperate, that upwards of an hour elapsed, after the destruction of the animal, before he could move from the bank on which he lay panting from fatigue. It is probable that he would have remained much longer in a recumbent attitude, had not his friends, alarmed by his absence, and the report of his attendant, gone out in search of him. By their assistance he was enabled to rise and return to the boat; and while walking to the river, in order to revive his exhausted spirits, they paraded his late formidable antagonist before him, lashed to a bamboo, and carried by eight coolies. —*Asiatic Journal.*

ON CONFESSING CHRIST.

It is indeed a trying dilemma, when a wife or daughter cannot confess Christ in their family, without giving offence. It is a very strong temptation to be silent, or to compromise evangelical truth, when the avowal of that truth breaks the harmony of the family circle. Christian firmness, with meekness and gentleness, is, however, kindness to the opposers. There is such cruelty to an ungodly parent, partner, or brother, as breaking faith with Christ, in order to keep what the world calls "peace" with them. For what is this peace, whilst you must carry about with you the dreadful conviction that they stand in danger of perishing by their unbelief? I call upon you to consider this most solemnly. For, could you so conceal your faith from them, as to satisfy them without endangering your own souls, would you not thereby even more effectually endanger theirs? Let our actions prove that we are interested in "that covenant which is ordered in all things and sure." Christ came to save the vile and the lost. "Faith" springs up, and fixes her eyes on Jesus, and stretches forth her hand, and lays hold of Jesus; and "Hope," elicited by these acts, says, "I may be saved," and clings to his cross; and "Love," the product of the other two, and the greatest of these heavenly virtues, attaches herself solely to him, and claims the fulfilment of his promise, "I love them that love me." And now "Faith," and "Hope," and "Love," in unison, forbid my drawing back, and claim me their willing and admiring captive.

Then "let your light so shine before men, that they may see your good works, and glorify your Father which is in heaven," Matt. v. 16; remembering that "the servant of the Lord must not strive; but be gentle unto all men, apt to teach, patient, in meekness instructing those that oppose themselves; if God peradventure will give them repentance to the acknowledging of the truth," 2 Tim. ii. 24, 25. M. G.

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THE BOTANIST.—No. III.

THE first division of the vegetable kingdom into twenty-four classes, was the subject of our last paper. We now come to treat of the first subdivision, namely, of each of those classes into several orders. Some of these orders are founded upon circumstances connected with the pistils, some are determined by the seed-vessel, and others by the stamens.

The subdivisions, or orders of the first thirteen classes are perfectly simple, they are determined and named according to the number of pistils in each flower; therefore the illustrations given of the most remarkable will be a sufficient clue to the discovery of the remainder. We will briefly enumerate the whole.

MONANDRIA has two orders: *Monogynia*, (signifying one pistil, see fig. 1, *Hippuris*,) and *Digynia*, (two pistils;) to one of these two orders every monandrous plant may be referred. The same remark will also apply to the orders of the following classes:—

DIANDRIA has three orders, *Monogynia*, in which is ranked the very pretty genus, *Veronica*, (fig. 2;) *Circæa*, or enchanter's nightshade, and a few others; *Digynia*, which has one species of British grass, the *Anthoxanthum odoratum*, sweet-scented vernal grass, (fig. 24.) This is the grass from

Fig. 24.

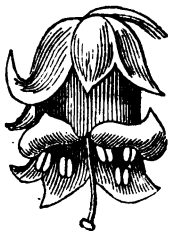
which is mainly derived the delightful fragrance of the hay-field; of *Trigynia* we have no native example.

TRIANDRIA has three orders, *Monogynia*, in which will be found the bulbous-rooted plants belonging to this class, as crocus, &c.; *Digynia*, (fig. 3,) which contains the bulk of the grasses, both foreign and indigenous; and *Trygynia*, of which the plant named blinks, (Montia fontana,) is an example.

TETRANDRIA has *Monogynia*, to which belong *Scabiosa*, *Dipsacus*, or teasel, *Galium*, or bedstraw, and cornel, (fig. 4;) *Digynia*, which has *Buffonia tenuifolia*; and *Trigynia*, the holly.

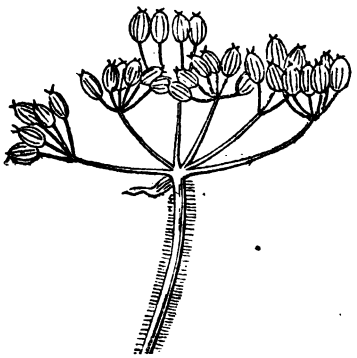
PENTANDRIA has seven orders in British Botany, *Monogynia*, *Digynia*, *Trigynia*, *Tetragynia*, *Pentagynia*, *Hexagynia*, and *Polygynia*. The first two are the most important, containing a large proportion of the whole vegetable kingdom; *Monogynia* contains the deadly nightshade, *Atropa belladonna*, (fig. 25,) and nearly the whole of a na-

Fig. 25.



tural family to which this plant belongs, called by Linneus, *Luridæ*, from their forbidding appearance, and noxious qualities. To *Digynia* all the true umbelliferæ (see fig. 26) may, with certainty, be referred; some others also belong to this order.

Fig. 26.



HEXANDRIA has four orders, *Monogynia*, *Digynia*, *Trigynia*, and *Polygynia*; the first is important, as it embraces nearly all the bulbous-rooted plants found in this class, (fig. 6.)

HEPTANDRIA has only one British order, and only one species, *Trientalis*, or wintergreen chickweed.

OCTANDRIA has *Monogynia*, *Trigynia*, and *Tetragynia*; the first containing the evening primrose, *Œnothera*, the heath tribe, *Calluna* and *Erica*, the spurge laurel, *Daphne*, &c.; *Trigynia*

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has the persicaria, *Poligonum*, (*P. amphibium*, when growing in water, and in blossom, is a beautiful object, and not uncommon in slow rivers or ditches;) *Tetragynia* contains the moschatel, *Adoxa*, and a few others.

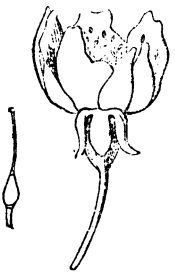
ENNEANDRIA has only one species British. *Butomus umbellatus* order, *Hexagynia*, (fig. 9.)

DECANDRIA contains four orders, *Monogynia*, *Digynia*, *Trigynia*, and *Pentagynia*;- the first has the *Arbutus*, or strawberry-tree, *Andromeda*, &c.; *Digynia* has the saxifrage, of which the London-pride, and a plant called the thread of life, are species; in *Trigynia* is the *Stellaria*, or stitchwort; in *Pentagynia* the *Sedum*, or stonecrop, planted for the decoration of rockwork.

In DODECANDRIA, *Monogynia*, where the *Asarum*, asarabacca, finds a place, this plant, which is delightfully aromatic, is considered valuable as an ingredient in cephalic snuff; *Digynia*, having the *Agrimonia*, formerly in high repute as a purifier of the blood; *Trigynia*, containing *Reseda*, mignonnette, of which we have two native species.

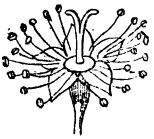
ICOSANDRIA has *Monogynia*, in which order we find most of our valuable wall-fruits, the cherry, (fig.27,) plum, apricot,

Fig. 27.



&c.; *Pentagynia*, embracing the genus *Pyrus*, of which the apple, crab, pear, and wild service, (fig. 28,) are species;

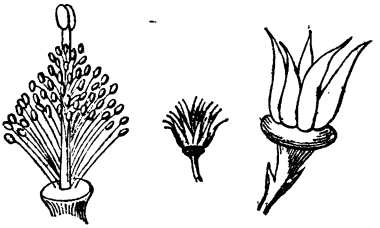
Fig. 28.



and *Polygynia*, to which order belong the charming and endless varieties of the rose.

POLYANDRIA, in this class, many of whose constituents are poisonous, and till known ought to be suspected, the orders are *Monogynia*. Example, *Glaucium*, the horned poppy, (fig. 29;) *Pentagynia*, having *Aconitum Napellus*, the monkshood, (fig. 30,) a plant which

Fig. 29. Fig. 31. Fig. 30.



should not be suffered to grow in a garden to which children have access, being a most deadly poison; *Polygynia*, here belongs the genus ranunculus,* the English varieties of which are called butter-cups, the appearance of whose golden blossoms, contrasted with the fresh green of the meadows, imparts such simple delight to young and old. The Asiatic variety is cultivated by florists; scarlet, yellow, and black turbans, are familiar to most persons; and besides these, they are now to be had of almost every variety of tint. The anemone also (fig. 31) is in this order.

Thus far the orders have been founded upon, and named simply from the number of pistils: in the following two classes, they are determined either by the presence, absence, or form of the seed-vessel.

DIDYNAMIA has two orders: in the first, *Angiospermia*, the seeds are contained in a seed-vessel, as in the *Digitalis*, fox-glove, (fig. 32.) In the

Fig. 32.

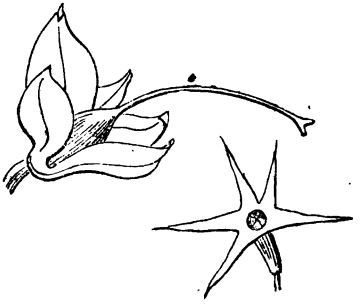


Fig. 33.

second order, *Gymnospermia*, the seeds are naked or exposed, that is, have no

* A description of the family Ranunculaceæ was given in the "Visitor," April, 1835.

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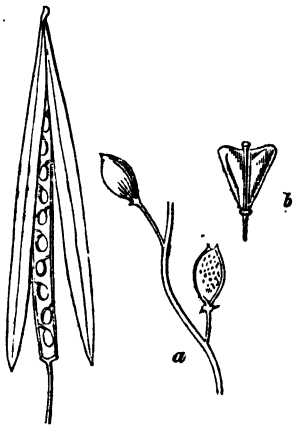
other covering than the calyx; as in the dead-nettle, *Lamium*, (fig. 33;) nearly all aromatic herbs belong to this last order, but the first has many poisonous plants.

TETRADYNAMIA has also two orders, determined by the length of the seed-vessel; where this is oblong, as in the wall-flower, (see fig. 34,) it belongs

Fig. 34. Fig. 35.



to the first order, *Siliquosa;* but where it is of any other proportion than oblong, it belongs to the second order, *Siliculosa;* two examples are here given, (fig. 35, *a.*) the silicule of the *Draba verna*, showing the seeds, (fig. 35, *b*,) the silicule of shepherd's purse, *Thlaspi bursa-pastoris.*

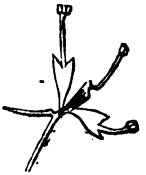
It will be remembered that the formation of the remaining classes was quite independent of the number of stamens. These organs are therefore made use of in the formation of the orders.

Thus MONADELPHIA has three orders; the first, *Pentandria*, because the flowers have five stamens, the musk plant, *Erodium moschatum* belongs to this order; *Decandria* is illustrated (fig. 16) by the *Geranium pratense;* *Polyandria*, by the *Althæa*, or marsh mallow, (fig. 36,) hollyhock, &c.

Fig. 36.

In DIADELPHIA are *Hexandria*, to which the *Fumaria* (fig. 37) belongs; *Decandria*, having the *Lathyrus*, or

Fig. 37.

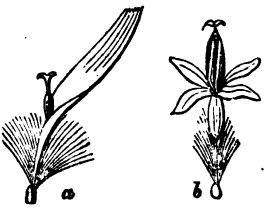


everlasting pea, (fig. 17.) The latter order comprises the greater part of the natural family, called *Papilionaceæ*, or *Leguminosæ*. For an account of this natural order, we would refer our readers to the "Visitor" of June, 1835.

POLYADELPHIA has but one order, *Polyandria*, and one genus among our indigenous plants, that is *Hypericum*, or St. John's wort, (fig. 18.)

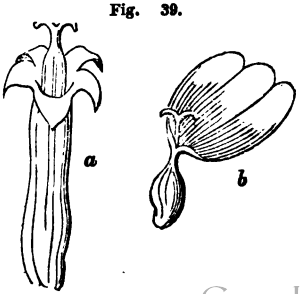
SYNGENESIA has five orders, but three only in British Botany; namely, *Æqualis*, when the florets of the ray, and the florets of the disk are all equal; that is, when each floret contains five stamens and a pistil, (fig. 38, *a*,) a floret of the

Fig. 38.



ray, *b* a floret of the disk; all the syngenesious flowers which have no ray, as the thistle; and those which may be said to be all ray, having no disk, as the dandelion, belong to this order. *Superflua*, when the florets of the disk are perfect, having both stamens and pistil, and those of the ray have a pistil only, as in the daisy and *Achillea ptarmica*,

Fig. 39.



(fig. 39,) *a* a floret of the disk,

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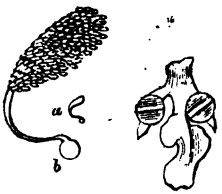
b a floret of the ray. *Frustanea*, when the florets of the disk are perfect, and those of the ray have neither stamens nor pistil, as in the *Centaurea*, (fig. 40.)

Fig. 40.

The two remaining orders, which, however, are only required for foreign plants, are *Necessaria*, when the florets of the disk have stamens only, and those of the ray pistils only. *Segregata*, when besides the general calyx of the whole flower, there are several smaller calyces, each embracing a division of the flowers, or perhaps a single flower, as in the true globe thistle.

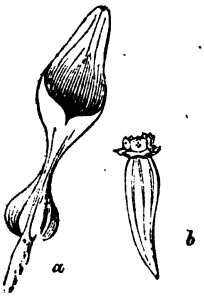
Gynandria has three orders British, *Monandria*, (fig. 41,) *a* the stamen, (or

Fig. 41. Fig. 42.



pollen mass, as in this class it is sometimes termed,) natural size; *b* the same magnified, of the *Ophrys apifera*, or bee orchis; *Diandria* has the singular and rare plant *Cyprepedium calceolus*, or lady's slipper; fig. 42 is a part of the flower, showing the two stamens and germen; *Hexandria* contains the *Aristolochia*, of which we have a native species, *A. Clematitis*, but it is scarce in a

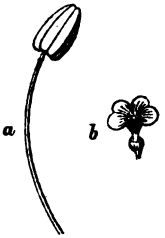
Fig 43.



wild state; fig 43, *a*, the flower, *b*, shows the six stamens, germen, &c. of this flower.

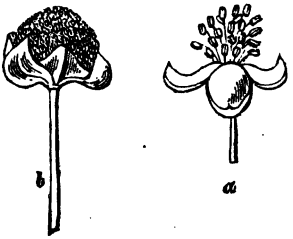
Monœcia has seven orders; an instance of order *Monandria* is *Zannichellia palustris*, (fig. 44;) *a* the stamen,

Fig. 44.



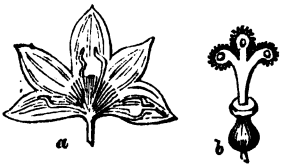
b the four petal-like styles; *Buxus*, of order *Tetrandria*, (fig. 21,) and *Sagittaria*, (fig. 45,) of *Polyandria*.

Fig. 45.



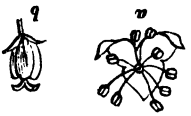
Diœcia has eight orders, *Bryonia dioica* (fig. 46) belongs to order *Pen-*

Fig. 46.



tandria; *Mercurialis perennis*, (fig.47,)

Fig. 47.



to order *Enneandria*; and the yew, (fig. 22,) to order *Monadelphia*.

Polygamia has only one genus British; it belongs to the order *Monœcia*, *Atriplex*, orache.

The twenty-fourth class, Cryptogamia is quite a separate branch of botanical study: we have therefore reserved it for future consideration.

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As our object in the foregoing and present paper has been to make the subject as intelligible as possible to the novice, we trust that we shall have the patience of those whose advantages have been greater, and that we shall not incur the charge of tediousness, for having been explicit, and leaving so little for the student to take for granted.

We are now half way towards one desirable object, that is, the ability to identify any plant with which we may meet: with a little more perseverance it will be acquired. In the next paper, we will endeavour to explain what constitutes the GENERIC characters.

Those of our readers who feel interested in the study of plants should make themselves acquainted with an admirable little work, now publishing in monthly numbers, "Baxter's British Flowering Plants." The engravings are so well executed, and the magnified dissections so valuable, that it is a treasure to a botanist "of any growth."

The following British plants flowered in the month of March, 1836.

TRIANDRIA, MONOGYNIA.

Eriophorum vaginatum, single-headed cotton-grass: bogs.

DIGYNIA.

Poa annua, annual meadow-grass: under walls, &c.

Sesleria cærulea, blue sesleria, a beautiful grass: scarce.

PENTANDRIA, MONOGYNIA.

Viola odorata, common violet.

HEXANDRIA, MONOGYNIA.

Scilla bifolia, two-leaved squill: woods.

Narcissus pseudo-Narcissus, daffodil: commons.

OCTANDRIA, MONOGYNIA.

Daphne Mezereon, the mezereon: on commons, and in woods.

Daphne laureola, the spurge laurel: in woods.

ICOSANDRIA, POLYGYNIA.

Fragaria sterilis, the barren strawberry: in woods.

TETRADYNAMIA, SILIQUOSA.

Cardamine hirsuta, hairy-leaved cardamine: sunny situations.

SILICULOSA.

Draba verna, early whitlow-grass: on walls.

SYNGENESIA, SUPERFLUA.

Tussilago farfara, coltsfoot: clayey soil.

MONÆCIA, TETRANDRIA.

Betula alnus, the alder: river-sides.

DIÆCIA, OCTANDRIA.

Populus alba, great white poplar.

Populus canescens, common white do.

Populus nigra, black do.

OLD HUMPHREY ON WAR.

SOME people may think that I am a very improper person to speak on the subject of war, seeing that I have, as the phrase is, never smelt gunpowder; or, in other words, never seen service; and to this I reply, If it be necessary to see the heads of men cut off, and their bodies wounded and bleeding to enable me properly to speak on the subject, may I ever remain unqualified.

Again it may be thought, that, however capable I might be to speak about war, it would not be overwise to do so now, inasmuch as this is, with us, a time of peace. But, if a state of warfare be the only opportunity which can be afforded me to express my opinion, fervently do I desire, so far as this subject is concerned, to be for ever silent.

My good friends, let me tell you that when a man feels strongly moved to speak on any subject, he is not easily persuaded of his incapacity. Now I feel at the present moment like a strong man; I seem to have something pent up in my heart that must come forth; listen to my observations, and judge me accordingly.

A time of peace is not an unfit season to speak of war; for He only, who knows all things, knows how long or how short a time the blessing of peace may be continued to us.

So long as public opinion is opposed to war, so long will it be difficult to engage in it; but remember that public opinion is made up of the private opinions of individuals, and therefore it cannot be wrong to set forth war in all its horrors, its injustice, and its iniquity.

It may be said that many wars have been inevitable. To this I answer, from the creation of the world till now, so far as we can judge by the knowledge that is come down to us, where one war has been undertaken with a virtuous end in view, hundreds have been engaged in through envy, covetousness, ambition, and revenge. "Whence come wars and fightings among you? Come they not hence, even from the lusts that war in your members?" These are not the words of Old Humphrey.

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How often have I heard men who looked upon themselves, and were regarded by others, as Christian men, standing high among their professing brethren, advocating war, as though it were a light thing with them, that ten thousand bodies should be hacked to pieces, and ten thousand souls sent in an unprepared state into eternity!

Should such things be? Ought not war to be regarded as a curse? Yes. Even when clothed with scarlet, accompanied with the flourish of trumpets, and adorned with the trophies of victory, war is the foulest offspring of sin, and that it can be loved without sin reigning in the heart is impossible.

Though I cannot tell, in many cases, how war is to be avoided, I feel that my foot is on a rock when I condemn all unnecessary hostility. If war be entered into with lightness of heart, with love of gain, or lust of power and reputation, it is an ungodly enterprise. The bravest chief who willingly draws his sword in an unnecessary war, has bloodguiltiness to answer for; his stars, and his garters, and his glittering emblems of honour, are only badges that proclaim him one of those whom God shall judge; for the "Lord hateth hands that shed innocent blood." Had I the power, I would utter a mighty cry, that should pierce the hearts of all that delight in war; I would proclaim aloud in all the palaces and the peasants' cots of the world, that when a king, by an unnecessary war, forgets that he is a man, he deserves to be no longer a king! and when a man forgets that he is a brother, he renders himself unworthy the name of a man!

You may think that I am getting warm, and to own the truth, I feel that this is the case The fact is, I have been talking for an hour with an officer, just returned from the sanguinary conflict now raging in Spain; and the account he has given me of the wanton, cold-blooded cruelties practised by both parties, has much excited me. Come, I will try to be more watchful over myself, and consider the matter more calmly.

I am a man of peace, and willingly would I have the whole world dwell in peace, and live in the knowledge and fear of God.

Look, my friends, at the whip of scorpions that man has made for man! Look at the blood-shedding inventions of the human heart! Bear with me while I hastily turn over a page or two of the dark history of human wars. The book of books, the Bible, tells us that "Cain rose up against Abel, his brother, and slew him." It is more than probable that the murderous deed was done with a club; for weapons formed for the purpose of offence were not then likely to be known. The blood that was shed cried even to heaven, and Cain was accursed of God. When "the wickedness of man was great in the earth," no doubt war and bloodshed abounded; for "the earth was filled with violence," though the Scriptures may not tell us of the weapons with which men used to destroy each other.

In aftertimes men were trained up to war, and then came the sling, and the bow and arrow, the sword and the spear to attack with; and the helmet, and the breastplate, and the coat of mail, to defend the body from injury. Strongholds, and fortresses, and walled cities were built. Battering-rams and powerful engines of destruction were used.

It is enough to make the heart sick to go through an armoury, and see the improvements, as they are called, in warlike weapons. The sharp arrow was not fatal enough—it must be poisoned! The edged blade was not deadly enough—it must be formed so as to give an incurable wound!

The dagger, the two-handed sword, the iron mace, the battle-axe, the pike, and the halberd, were but a part of the weapons that were used. But deadly as these were, they could not keep pace with the desire for human destruction. Some swifter, some more wholesale destroyer was required, and gunpowder was invented. The matchlock, the gun, the culverin, the cannon, and the mortar followed each other; and thousands and tens of thousands were added to the slain.

When war once became a trade, no wonder that it should increase in the earth. Nations rivalled each other in their armies and their navies. Infantry and cavalry, engineers and artillery men, soldiers and sailors, generals and admirals, became abundant. Oh, what blood has been shed, and what unnumbered millions of money have been spent, scattered, wasted, worse than wasted, in ungodly warfare!

When I read of forts and castles, with their parallels and parapets, their outworks, their bastions, their angles, their ramparts, and their citadels; when I read of bomb-boats and fire-ships, and

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rockets and red-hot shot, I seem amazed that any thing this world possesses can be thought so desirable as to be purchased at so dear, so dreadful a price as that of war.

Even gunpowder, wide wasting as it is, has not satisfied the insatiable desires of war. A still more devastating power has been invented. By the use of steam, a complete stream of bullets and of cannon balls can be poured forth on errands of destruction.

When will men's hearts relent? When will a holy influence fill them with mercy, and charity, and love? When will swords be beat into ploughshares, and spears into pruning hooks, and men learn war no more?

If we could number the victims that fell in war among the nations of old, it would astonish us, but they are innumerable. If we look at Jerusalem alone, during the last siege by the Romans, a hundred and fifteen thousand dead bodies were carried out at one gate —six hundred thousand in all; and hardly a place remained in the city uncovered with carcases. Six thousand perished amid the burning cloisters of the temple; ten thousand others were slain. Eleven hundred thousand perished during the siege and the sacking of the city, and when Jerusalem was given up to the devouring flame, every street ran down with blood. Is this a picture that a Christian man, a man of peace can regard unmoved?

If we give but a moment to the consideration of how many human beings must have fallen in war, during the overthrow of the Chaldeans, the Assyrians, the Persians, the Macedonians, the Grecians, and the Romans, well may we exclaim, Oh, what a slaughter-house has sin made of this fair world!

It is said of Cesar, the greatest of the Roman conquerors, that he fought fifty pitched battles, overturned the liberties of his country, and slew a million, one hundred and ninety-two thousand men! Fancy to yourselves that same Cesar, when the last "trumpet shall sound, and the dead be raised incorruptible," when the Searcher of all hearts, the Almighty Judge, clothed with "clouds and darkness," and "righteousness and judgment," shall come with ten thousand of his saints to execute judgment upon all—imagine, I say, that same Cesar entering the presence of the Holy One, with the intolerable, the overwhelming weight of the wantonly shed blood of a million, one hundred and ninety-two thousand of his fellow-creatures! Look at the fearful picture, and then ask yourselves if you wish to be Cesars.

Human life is short enough without employing the murderous weapons of war to make it still shorter. We shall get more heart's repose by living in brotherly love, than by shedding each other's blood. Worldly men may love war, but Christian men cannot do so without denying their Leader and their Lord. The gospel forbids and condemns war, and a man under the influence of Christian principles can no more become a wanton advocate for war, than he can become a robber on the highway. Show me one that would willingly encourage war, and I will show you one who is an unchristian character, whatever may be his rank and his profession.

Have I spoken too plainly? No. It cannot be. The words of the Redeemer are so clear, so intelligible, that it is impossible to mistake them. "A new commandment I give unto you, That ye love one another; as I have loved you, that ye love one another. By this shall all men know that ye are my disciples, if ye have love one to another."

If love to each other be required as a proof of our love to the Redeemer, will not hatred to each other be received as a proof of hatred to him? If the word of God be true, "wisdom is better than weapons of war." Let us follow after forbearance, and forgiveness, and mercy, and love, and peace; but let us set our brows as brass, and our face as a flint, against the sin and the sorrow of cruel, relentless, and ungodly war!

SELF-DECEPTION ILLUSTRATED BY AN ANECDOTE.

"It is a good sign when you are afraid of self-deception, and court the scrutiny of God; when you are willing to know the worst of your own case, and desirous to judge impartially; and when, for this purpose, you call in the eye of God to search you."

The following anecdote will illustrate a disposition in men to hide from themselves what they believe to be true. Two gentlemen were fellow-passengers in a vessel bound to a distant port. One was in vigorous health, and the other emaciated with disease, and manifesting premonitory symptoms of a speedy dissolution. He was young and intelligent, but had not

made what he knew to be the necessary preparation for the event which was rapidly approaching. His fellow-passenger, as they were drawing near the port whither they were bound, advised him to consult an eminent physician who resided there. "No," he replied, "I shall not consult him." He was asked, Why? To which he answered, "It is not because I do not entertain the highest opinion of his skill, but he will honestly tell me that my disease is incurable, that I must die; and I do not wish to receive the announcement from such a source."

It is just so with the multitudes who know that they must die, and that they are totally unprepared for the event. They are afraid to consult the great Physician lest they should be told the worst of their own case In opposition to their better judgment, they endeavour to hide from their eyes the doom which awaits them. Their deception is voluntary, it is of their own choosing. They wish it to be so, and therefore do they avoid the means of detecting and exposing it.—*Charleston Observer.*

FAITH.

O FAITH, faith! thou blessed companion of the children of God! Thy wondrous power deprives the wilderness of its horrors, and the deepest solitude ceases to be solitary under thy guidance! All that earth and heaven possess of beauty is thine, and with the treasures of heights and of depths thou enrichest thy possessors! That which is distant is brought near by thee; thou developest hidden things, and awakenest past events to new life. Thou mergest the gloom of the present into the bliss of the future, and paintest the sky of many a departing sun with the dawning radiance of a better world. In the midst of sublunary changes, thou anticipatest a peaceful paradise. Thou peoplest our bereaved family circles with holy and heavenly company; thou dost associate both worlds in close connexion, and unitest things past, present, and to come. In thy light the sacred narratives seem acted over again, and our own personal history becomes a sacred record of Providence. Thou hast the power of realizing the dead as if they were alive; the patriarchs are our contemporaries, although their ashes repose in the sepulchre of near six thousand years. By thy voice they still converse with us, although to human ears they speak no more; by thy realizing aid they visit us in our darkness with kindness and consolation; by thy light we see a cloud of them as witnesses encamped around us; and whatever grace they experienced is, through thee, appropriated to ourselves. Thou nourishest us with the promises made to Abraham, sustainest us with the strong consolation of the oath divinely sworn unto Isaac; thou givest us the staff of Jacob to support our steps; thou enablest us with Moses' rod to divide the sea, and with David to leap over the wall and rampart. O faith, faith! thou door-keeper of every sanctuary, thou master over all the treasures of God! May He who is thine Author draw near unto us; and may He who is thy Finisher bend down himself towards us!—*Krummacher's Elijah.*

UNBELIEF.

BEAR up against unbelief, or distrust of God, under great distresses. Say not, Oh my case, and the church's case, is sad indeed; the ground is not a light mould, but thick, heavy, stubborn clay, and withal very dry; how shall it be broken up? Where are the oxen strong for labour? Say not so in the way of unbelief. The great God can moisten the earth, provide the oxen, do all in a moment. Remember that great man in whom unbelief was predominant, 2 Kings vii. He talks of "windows in heaven," and yet the shop-windows on earth were open the next day, according to the prophet's words, verse 16. The great man saw the market, but it was no fair one to him, for he was trodden to death, verse 20. Remember his example, not by way of imitation, but caution.—*Crane.*

PRUDENCE.

PRUDENCE and economy are practical parts of religion. By attending to these duties, we may avoid the criminality and discredit of busybodies, and may the better exercise the duties of hospitality and liberality in the cause of the Saviour, and of his poor disciples.—*Cobbin.*

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Richard II. resigning the crown.

ENGLISH HISTORY.

HENRY IV.

The dethronement of Richard II., and the accession of Henry IV., evidently proceeded from a general feeling of the most powerful part of the nation against the misrule of their wretched king; not from a series of ambitious measures on the part of Henry: still when the crown was within his reach, he showed that he was not proof against the temptation. Richard resigned the crown, but this though done openly in the parliament, as represented in an ancient illumination, in the above engraving, was by compulsion, and, at any rate, the next heir should have succeeded. But Henry claimed the throne; his claim was admitted; and from that moment he involved himself in trouble. As a subject, he might have been respected and powerful; but he climbed a step too high, and his footing was insecure. It was evidently his policy to adopt such lenient measures as should attach to himself even those who had been adherents of Richard; but in so doing he displeased the more grasping of his own partizans. Even in his first parliament, quarrels arose among the nobles, who loudly threatened each other. This was followed by a conspiracy to kill Henry at a tournament appointed to be held at Oxford; but the lord Aumerle revealed the plot, and many of the conspiring nobles were executed, after an unsuccessful effort to rouse the nation in behalf of the deposed king.

This attempt was soon followed by the death of Richard, at Pomfret, in February, 1400. His decease was ascribed to vexation at the defeat of his supporters, and he may have died of what is commonly called a broken heart; but the people believed that the deposed monarch was murdered by hunger and cold. The story that he was murdered by a blow upon his head by Sir Piers Exon, was disproved by the examination of his remains a few years since. From the time of Richard's death, it may be said, Henry had no quiet.

The king of Scotland having declared war against England, Henry marched into that country, but the Scots avoided an engagement. Still he found trouble at home. A chieftain of Wales, named Owen Glendower, descended from the princes of that country, refused or neglected compliance when summoned to attend the king to Scotland. Henry, on his return, marched into Wales to punish Owen, who had taken arms in consequence of his lands being granted to Lord Grey, whom he charged with treachery, for not delivering the summons to attend Henry. The Welsh chieftain retired to the

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mountainous fastnesses of his country, and repeatedly compelled the king to retreat. Glendower continued in arms, supported by his countrymen, and even by the French; and in one of his predatory inroads, he took prisoner Sir Edmund Mortimer, the uncle of the Earl of Mortimer, whose hereditary right to the throne was preferable to that of Henry. A wet season, and the consequent floods and storms having assisted Glendower, it was currently reported that he was protected by the result of magical arts; but the increasing unpopularity of Henry sufficiently explains the source from whence he derived his support, and he continued in arms with various success till 1409, when he was driven into exile, and severe laws were enacted against the inhabitants of the Principality.

In Ireland, prince John, a younger son of Henry, was defeated and wounded in an attempt to reduce the rebellious Irish, and the English settlers were obliged to pay a sort of tribute to the native Irish chieftains. Henry was more successful in the northern border. The Scots having invaded Northumberland, were defeated at Homildon, in September, 1402, by the Earl of Northumberland and his son Hotspur, when Earl Douglas, the Scottish general, was taken prisoner.

The insecurity of his throne early induced Henry to seek support from the superstitious feelings of his subjects. At his coronation he was anointed with oil said to have been given to Thomas à Becket by the virgin Mary, with a prophecy, that the kings who received unction therefrom, would be kind to their subjects, and champions for the church. He sought further aid from the clergy. They engaged to support him, but it was at a price which will ever cover his name with infamy; and his base compliance with their demands has been too cursorily passed over by historians in general. In the second year of his reign, he consented to enact a law against all who should openly, or in secret, write or speak against what was called the catholic faith, and the determination of the church. Those who had the books or writings of Wickliff and the Lollards, were especially subjected to punishment, which never was regularly sanctioned by parliament. The offenders against this statute were to be ascertained, not by process at common law, but by the inquiries of the Romish bishops and ecclesiastics; and when condemned by them, were to be delivered to the magistrates, and without farther investigation, burned alive openly in the sight of the people, to be a terror to others.

Arundel was at that time archbishop of Canterbury. He was the chief promoter of this cruel law, and immediately caused it to be put in force, by condemning William Sawtree, a priest of London, for refusing to worship the cross, and for asserting that the bread used in the sacrament continued to be bread after the priest had pronounced over it the words repeated in the mass service. For these reasons, William Sawtree was burned alive; the first of the noble army of English martyrs, who counted not their lives dear to them in resisting the errors and abominations of popery.

"Patriots have toiled, and in their country's cause
Bled nobly; and their deeds, as they deserve,
Receive proud recompense. A patriot's blood
Well spent in such a strife, may earn, indeed,
And for a time insure, to his loved land
The sweets of liberty, and equal laws.
But martyrs struggle for a brighter prize,
And win it with more pain. Their blood is shed
In confirmation of the noblest claim,
Our claim to feed upon eternal truth,
To walk with God, to be divinely free,
To soar, and to anticipate the skies.
Yet few remember them. They lived unknown,
Till persecution dragged them into fame,
And chased them up to heaven. Their ashes flew—
No marble tells us whither. With their names
No bard embalms and sanctifies his song:
And history, so warm on meaner themes,
Is cold on this. She execrates, indeed,
The tyranny that doomed them to the fire,
But gives the glorious sufferers little praise.

COWPER.

Peace could not be obtained for England by such proceedings. In the year 1403, the differences between the king and the Northumberland family proceeded to such an extent as to induce the latter to take up arms. The principal subjects of dispute were the refusal of Northumberland to give up the prisoners he had taken at Homildon, and the refusal of the king to ransom from Glendower, Mortimer, whose sister the Percy had married, and who was by lineal descent heir to the crown. The nation at large appear not to have taken much interest in the matter, and the troops engaged were not numerous. A fierce battle was, however, fought at Shrewsbury, in which Hotspur, the son of Northumberland, was slain, and Douglas who had joined him was taken prisoner. Subsequent efforts were defeated. This was in 1408.

The encroachments of the clergy

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were not allowed to pass without resistance from the laity. The Commons in parliament, felt their power increased under the rule of an usurper, and on several occasions acted with independence. They gave the king a large supply, but required the dismissal of some of his attendants, which was granted. They also petitioned against foreign clergy, non-residence, and pluralities; against the practice of enticing youths to become friars, and also against the exemption of the clergy from taxation and personal service.

In 1410, another effort was made to draw the attention of Henry to the undue power and wealth of the Romish priests, and the cruelty of the statute against the Lollards. The clergy resisted these efforts. "If I live," said the primate to the speaker, "Thou shalt have hot taking away any thing I have." But the king was not a slave to the pretended authority of the prelates farther than he was induced by policy. He caused the Archbishop of York, who had assisted Northumberland, to be executed as a traitor. The popular feeling seems to have been excited by the public burning of John Badby, a tailor, who would not admit that it was possible a priest should make the body of Christ. The poor tailor was burned in Smithfield, in the presence of the prior of St. Bartholomew's, and other leading ecclesiastics; the Prince of Wales also attended. The heir-apparent of the throne sought the favour of the priests by thus countenancing their cruelty. Hearing Badby implore the Divine mercy, the prince ordered the fire to be quenched, thinking he would recant, but Badby was able to refuse both the offers and the threats of the prince, who then commanded the flames to be again kindled. The faith and patience of the sufferer enabled him to triumph under this cruel death.

Thus the Bolingbrokes gave themselves up as tools to the church of Rome; and they experienced the fate denounced against a royal family of persecutors of the saints; "I will bring evil upon thee, and will take away thy posterity." Though Henry IV. was permitted to triumph over his opponents, he had no enjoyment of his throne: he was afflicted with leprosy and epileptic fits, and in March, 1413, he died at the age of forty-six, after enduring severe bodily sufferings, and deep mental anguish. During his last two years, he was under considerable restraint as to the exercise of his prerogatives, with regard to which the prince of Wales seems to have taken a part by no means consistent with filial duty. These facts are to be traced from the general notice of proceedings recorded in the parliamentary rolls; but the details are not supplied by the contemporary historians.

During this reign, there were constant hostilities between England and France, but mostly of a desultory nature, and by sea. On one occasion, Henry, when crossing the mouth of the Thames, was nearly taken by some French privateers, who captured four vessels having his baggage and attendants on board.

In 1412, an English force landed to take advantage of the civil discords then prevailing in France; but their presence frightened both parties into terms of union, and a large sum of money was paid as the price of allowing them to depart.

Had Henry continued in health, it is probable that he would have engaged actively against France, since the settlement of domestic troubles left him at leisure to do so; but mental remorse, and his declining health, led him to direct his remaining powers to another object. He planned an expedition to Jerusalem, partly as a crusade to rescue it from the power of the infidels, and partly as a pilgrimage; in the vain hope of thereby meriting forgiveness of his sins, especially the irregular methods by which he had gained the crown. He had been told that he should die in Jerusalem; and feeling his health fail, he was anxious to proceed thither, hoping for spiritual benefit from the locality in which he might expire. It is said that by a singular coincidence, when struck with the last and fatal attack, he was carried into an apartment long afterwards pointed out in the ancient palace of Westminster. On inquiring where he was, he found the room was called the Jerusalem chamber, when he acknowledged the delusion under which he had lately been, as to his dying in the holy city.

Thus departed Henry IV., a king whose qualities in the sight of man were in many respects of a shining character; but he began by committing wrong, and he sought to strengthen himself by selling himself to work wickedness in the sight of the Lord, stirred up by the unprincipled bigotry and cruelty of the church of

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Rome; and thus his memory is to be held up as a warning to those who seek to build their houses by unrighteousness. Yet he was an instrument in the hand of God to punish other wrong doers; and those who with injustice equal to his own, opposed his government, also suffered eventually. The following lines from "Hardyng's Chronicle" are descriptive of Henry's sufferings during the latter part of his life; the orthography is modernized.

"In very truth what torment had this king!
To remember in brief and short intent,
Some in his shirt put oft time venoming,
And some in meat and drink great poisonment;
Some in his hose by great management,
Some in bed straw,—irons, sharp ground, well, and whet,
Envenomed sore to slay him, if he had on them sat.
Some made for him divers enchantments,
To waste him out, and utterly destroy;
And some gave him battle full felonment,
In field within his realm him for to annoy;
And on themselves the hurt and all the annoy
Did fall at end, they hanged were and beheaded
As traitors ought to be in every state."

INSANITY.

I HAVE visited the home of humiliation, the domestic circle of sorrow, I have been to an asylum for the insane, where hundreds of my afflicted fellow-creatures are congregated under such restraint as their infirmities require. There are they kept from annoying others, and there are they protected from themselves. I saw the vacant-featured idiot, sitting on the corner of his bedstead, waving his head backwards and forwards, and repeating the words Pall, lal, lal, without object and without understanding. I shuddered at the gloomy hypochondriac, whom moody madness had girt round with imaginary terrors: he had crept into the darkest corner of his gloomy cell, vainly endeavouring to press his emaciated body closer to the cold walls. I gazed also on the infuriated maniac, his eye brightening with frenzy, and his hands tearing his hair, and tugging at the chain that bound him. One moment he made the walls ring with his laughter, and the next his body was wrenched with the most violent contortions.

If, reader, you have never visited a lunatic asylum, you may be a stranger to these things; but were you to see a poor insane fellow-creature chained to the ground, raving and tearing, and not knowing what he did, would you not pity him from the bottom of your heart? Would not his wild burst of unsubjugated laughter make you ready to cry? You will answer, Yes. Well, now, I have a question to put to you, and if you cannot answer yes to that, verily you are deserving of pity too: you have more reason to cry for yourself than for the poor maniac.

Seeing that you came into this world a lost and guilty sinner, born in sin and conceived in iniquity, under the curse of the law on account of actual transgression, and in consequence under the wrath of Almighty God; seeing that if you die in the condition in which you came into this world, there is no hope that you can escape from the worm that dieth not in the world to come; seeing that your life, compared to eternity, is but a moment, that there is but one step between you and death, and that there is but one way and one name given under heaven, whereby a sinner may be reconciled to an offended God, and saved from everlasting death; the question I have to put to you is this—Are you seeking, before every thing else in the world, to be reconciled to God through Jesus Christ?

Such language as this may not seem very suitable to your case. That there are sinners in the world, who need to be reconciled to God, you will not gainsay; but you may be a thoughtless young man, with many accomplishments, and very well thought of and respected by your friends and acquaintance. Or, you may be a lively young lady, well-educated, and what is considered amiable, the very life and joy, perhaps, of all your relations and friends. Or, perhaps, you are the father of a family, a man of business, industrious, provident, hospitable, and respected by all the country round; or a kind and careful wife, rising up early and looking well to the ways of your household, praised and beloved by all who know you; or an old man or woman, with grey hairs on your head, and wrinkles in your forehead, yet blithely and smilingly sailing down the stream of time, and heedless of the coming crisis; or, if a shadowy thought arise, looking back upon a long life, and seeking comfort from the vain boast that you have never done your neighbour any harm.

Now, in any of these cases, such language as this may seem very unsuitable to you; but, reader, consider your not feeling yourself a sinner makes no difference as to the fearful truth that you are one. If you have not felt "the blood of sprin-

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kling" applied to your conscience, the purging away of "the old man," and the renewing of your heart and life by the working of the Holy Spirit, it is certain from the word of God, that you belong to the generation that is "pure in their own eyes, and yet is not washed from their filthiness." You may not feel yourself a sinner now, but you must feel it one day, either clinging to the cross of Christ, or calling upon the rocks and mountains to fall on you, and hide you from the wrath of God.

"The day cometh, that shall burn as an oven; and all the proud, and all that do wickedly," (now all are proud in heart naturally, and all have done wickedly, therefore all who are not reconciled to God) "shall be as stubble; and the day that cometh shall burn them up, saith the Lord of hosts," Malachi iv. 1.

Take it not for granted that you are reconciled to God, because you are in a Christian land, where the sabbath bell is heard on the sabbath morn; because you attend God's house, and read your Bible, and say your prayers. If you are not humbled to feel yourself a lost and helpless sinner; if you are not looking solely to the Lord Jesus Christ, as your only ground of acceptance, and hope of salvation, trusting entirely to his merits and his mercy, your "heart is not right in the sight of God," you are yet "in the gall of bitterness, and in the bond of iniquity."

"The day cometh that shall burn as an oven." O reader, there is not a moment to lose! Consider your riches as dust in comparison with Divine grace; seek to be reconciled to God. Are you poor? forget the bread that perisheth, and seek to be reconciled to God. Are you high? bow down to the earth, and seek to be reconciled to God. Are you lowly? rise up from the dust, and seek to be reconciled to God. Sleep not, rest not, day nor night, till you have sought to be reconciled to God through Jesus Christ.

"The day cometh, that shall burn as an oven." What shall it profit you in that day, that your name was extolled from the north to the south, and inscribed on marble and on brass, if it be not found in the Lamb's book of life? What shall it profit you in that day, that the whole universe consisted of your friends, if God be found to be your enemy? If God be against you, who shall be for you? And if you die before you are reconciled to Him, in that day he will be against you; and who may stand in his sight, when once he is angry?

Though you live to the age of Methuselah, life soon passeth away, and "what shall it profit a man, if he gain the whole world, and lose his own soul?" If you do with all your heart and life seek reconciliation with God in the prevailing name of his Son, pardon is yours, Christ is yours, heaven is yours; but if you will not be reconciled to God in time, he will justly punish you to all eternity; it will assuredly be said to you, "Depart from me, ye cursed, into everlasting fire, prepared for the devil and his angels." I would press this subject home to you; for again I say, the maniac is not more an object of pity than you, if you can live happy, and look happy, without seeking to be reconciled to God through the atonement of Christ.

There are many kinds of madness in the world; but no madness can be greater than yours, if, with heaven and hell before you, you are not seeking reconciliation with God.

"The day cometh, that shall burn as an oven." Make haste, there is not a moment to lose; for a moment may call you out of this world! Go, and before you seek bread to eat, seek to be reconciled and accepted with God, through his Son Jesus Christ. His own word is an all-sufficient encouragement. "Him that cometh unto me, I will in nowise cast out."

If you are seeking this great salvation, the wisest philosopher excels you not in wisdom; if you are neglecting to seek this, the wildest maniac surpasses you not in madness and folly.

OLD HUMPHREY ON HEART SEARCHING.

I do not know whether your path through life has most resembled a bog or a bowling-green, a thorny brake or a well-rolled gravel-walk; but as the Father of mercies has appointed that for our good in this world sunshine and shade, pleasure and pain, should be mingled; inasmuch as it hath pleased Him, I say, that men should be born to trouble, as the sparks fly upward, so I suppose of trouble you have had your share.

Not that it very much matters whether we journey through the sultry desert, or lie down in green pastures, gently strolling beside the still waters, so that

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we have the presence of God with us. Bound as Shadrach, Meshech, and Abednego were, and unwonted as the heat of the fiery furnace was into which they were cast, they had neither cause nor inclination to complain, for there was One seen walking with them in the midst of the fire, in form like unto the Son of God. If you have been walking in the same company, whether your face has been bright with smiles, or clouded with tears, no matter.

I want to search your hearts a little on the present occasion; for now and then a little heart-searching is a good thing—not a pleasant thing, but a good thing—seeing that it ministers to the health of the mind.

It has been my lot to witness many scenes of affliction and human sufferance, in sick-beds and asylums, and workhouses and hospitals. I have been with the surgeon when his knife has been at work; when the nerve, the vein, and the artery have been laid bare, and the offending limb amputated. I have attended the dissecting board, and witnessed the breathless body of a fellow-being in its humiliation. Something too much of all these things have I known; and if you have known them too, you will comprehend at once the significance of the term "laying the heart bare."

You need not be frightened at me, for I am no surgeon; the pen is my weapon, and that I can use but very indifferently; how then I shall succeed in laying your hearts "bare," is a matter involved in much uncertainty.

It much struck me, some time ago, when I heard an eminently humble and pious follower of the Redeemer say, that the Lord had dealt very mercifully with her, in "hiding her transgressions." The thought has occurred to me again and again, how sad the situation of God's people would be in the world, what a spectacle to be gazed on with wonder, if God, in his matchless and manifold mercies, had not hid their transgressions.

How is it with you in this respect? Are you fair and quite upright in all things? Are you exactly what the world around considers you to be, or are you indulging some secret sin, which the eye of God beholds, though you conceal it from human gaze?

The "Visitor" gets into the hands of the rich, as well as into the company of those whose worldly means are more limited, and therefore I can speak to the rich, as well as to the poor; and, hark you! if you be rich, I shall not spare you on that account. Whether you are a peer or a pauper, Old Humphrey does not care the value of one farthing. Those round about you who fear you, or hope to obtain something at your hands, are not likely to tell you plain truths; but as I neither fear your ill-humour, supposing you sometimes indulge in it, nor hope to gain any part of the money you have in your pockets, the plain truth shall be spoken.

It may be that you and the world are on tolerably good terms; your reputation stands pretty fair; you have no particular "blot on your escutcheon," but let me ask you a plain question. Is this because you are really spotless, or because your character and conduct are not fully known to others?

Judging by outward appearance, worldly men no doubt call you "a fortunate man." Your humbler neighbours, your tenants, and your poor relations, think you are "a great man," and those who worship with you on the Sabbath conclude that your "lines are fallen in pleasant places," and that you possess "a goodly heritage."

It may be that you keep a carriage; that you have a large balance in your banker's hands; that your property in the funds is considerable; and that your estates are altogether free from mortgage. You are, perhaps, looked up to with respect, as a man of property, probity, and piety; and held in high estimation by your friends. It is not my wish, for a moment, to diminish aught of these things; rather would I increase them had I the ability, if by so doing it would add to your earthly happiness and your heavenly hopes; but I want to send you home to your own bosom, to lay your heart bare. Never mind, just for the moment, what other people think of you; they know nothing at all about the matter; but I ask, what do you think of yourself?

Are you just in all your dealings, doing to others as you would they should do to you, were you to exchange positions with them? Do you behave well to your servants? Are you as free from pride as you wish people to suppose? Are you as kind to your poor relations as you should reasonably wish them to be to you were you poor and they rich? Do you give to the poor as much as you ought?

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Is your almsgiving unmingled with ostentation? I know that I am trying you rather hardly; I am going a long way, but I must go yet a little farther, so let me beg you to stand up fairly, like a man. Is there no act of justice which you know you ought to do, that you are delaying? no secret sin in which you are indulging? Are you a sincere and humble follower of Jesus Christ? Are you grateful to God for the gifts with which he has intrusted you? Do you consider yourself as his steward, bound to use them to his glory; and are you ready, whenever he shall require it, to give an account of your stewardship? After you have put these questions to your own heart, and replied to them with sincerity, let me again ask, whether, in your own estimation, you are not more indebted for your present character and reputation to the comparative ignorance of your fellow-sinners, than to your own deserts?

Well, now let me move on to the middle class of mankind, which is much larger than that which contains the rich alone. In this class may be reckoned the generality of those who follow a trade, as well as persons filling situations as clerks, and those who by their own exertions are fully able to provide necessaries and comforts without feeling the evils of poverty. Are you in this class? if so, I have a word or two to whisper in your ear.

Remember, I am not going to accuse you. I am only about to ask a few questions; answer them to yourself in godly sincerity.

I need not tell you of the trickery and dishonesty that is often practised in trade. I need not tell you that the necessaries of life are too often adulterated; that short weights are sometimes used; that the little finger, now and then, touches the scale beam; and that the cloth is cut, occasionally, on the wrong side the thumb. I am afraid these things are too common for many persons to be ignorant of them. Oh how miserably we deceive ourselves, when we deceive others! How blind we are when we do wrong in secret, and say, "The Lord shall not see, neither shall the God of Jacob regard it!" "The eyes of the Lord are in every place, beholding the evil and the good." O Lord, "the darkness hideth not from thee; but the night shineth as the day: the darkness and the light are both alike to thee."

If you hold any situation, I will not suppose that you systematically injure your employers, or recklessly waste their time or your own. If you are in trade, I will not suppose, for a moment, that you are one of those who think it lawful to get rich at all hazards; that you consider it no crime to oppress your workmen and impose upon your customers; but, on the contrary, give you credit for being what the world would call an upright tradesman; but, now, do not shrink from my question. Are you, in your own estimation, as upright as you are in the opinion of others? If instead of being judged by man, who knows you not, you were to be judged by Almighty God who knows you, do you think you would stand so fair with your neighbours as you now do? or are you conscious that you are what you are in the eyes of the world, because men know not the "whole truth" as to your life and character?

I know these are heart-searching inquiries, and not such as we are in the habit of putting to one another every day in the week; but for all that, they may not be unnecessary. It is a grievous thing for any one to act unfaithfully to those above him, or to oppress, in any way, those beneath him; whether, then, you are a master or a servant, your catechising yourself, as I have catechised you, will do you no harm.

And, now, shall I leave off without a word to the poorer classes? Oh no, he is no friend to the poor who is not willing to correct their errors, as well as to increase their comforts.

There is many a poor man who reads the observations of Old Humphrey as often as they appear in the "Visitor," and, to speak the truth, I more frequently have a poor man, or a poor woman, than a rich one in my eye, when I dip my pen into my inkstand. Willingly, had I the power, would I plant a grape-vine against every poor man's cottage, place a Bible on his side-table, and be the instrument of imparting the consolations of that blessed Book to his heart.

Well, then, let me suppose that you are poor, and that you have the character of being honest, sober, and industrious. It may be, too, that God of his great mercy has made you tolerably contented in your situation. Perhaps you know that riches will not make a man happy, nor the absence of them render him miserable and

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you may sometimes repeat the texts, "The sleep of a labouring man is sweet, whether he eat little or much: but the abundance of the rich will not suffer him to sleep"—"Better is little with the fear of the Lord than great treasure and trouble therewith." Let me then ask you, as I have asked others, if you were called upon at the hour of midnight, when no eye, save that of the Almighty, is upon you, to give a true character of yourself, what would that character be?

I do not want to be referred to your master, or to your neighbour, or to your friends, for your character; for you may think, and say, and do a thousand things that they know nothing of. Put the question to yourself, calling to mind every idle word that has been said, and every evil deed that has been done by you, and then, perhaps, you will see that you have no cause for boasting, but much for using the publican's prayer, with smitings on your breast, "God be merciful to me a sinner."

And now let the heart-searching inquiry be directed to my own bosom; let me, as I have catechised others, catechise myself. I may not intentionally have wronged my neighbour; I may not willingly have injured the widow and the fatherless; oppressed the weak, or ground the face of the poor; but the question is, Do I know that I am, in integrity and godly sincerity, in all respects the man I am taken to be by those around me? To this I answer, "To the Lord our God belong mercies and forgivenesses, though we have rebelled against him." "It is of the Lord's mercies that we are not consumed, because his compassions fail not." "Hide thy face from my sins, and blot out all mine iniquities." Blessed be God that "the blood of Jesus Christ his Son cleanseth from all sin."

EXTRACT OF A LETTER TO AN APPRENTICE FROM HIS FORMER TUTOR.

LET me warn you not to build upon any transient impressions; they must be deepened by prayer and watchfulness: nothing else can secure their continuance. You are only a very young disciple, if as yet you have tasted that Christ is precious, 1 Peter ii. 3; you must not wonder, therefore, if your faith is not as strong as that of Abraham or Paul, and that you should sometimes not be able to withstand temptation, even when you most desire to do so. But you will invariably find that when you fall, it is not that the Spirit neglects or forsakes his work, but that you are yourself unguarded, unwatchful: some proud thought, some self-dependence springs up, and the promise is, "The *meek* he will guide in judgment: and the *meek* he will teach his way," Psalm xxv. 9.

Why should you experience the melancholy you speak of? Why should you be either miserable or unhappy? You need not be so another day, another hour. If you really in humble dependence choose Jehovah for your God, and Christ for your Saviour, depend upon it his Spirit will "guide you into all truth," John xvi. 13; "he will never leave you;" no, "never forsake you," Hebrews xiii. 5; and you shall have "peace in believing," Romans xv. 13. Does any man "lack wisdom, let him ask of God, who giveth to all men liberally, and upbraideth not," James i. 5.

Now, my dear young friend, for a few more particular directions regarding the stand you must make when you fully enter on the situation on which you seem called upon to occupy. Never commence a day without reading the Scriptures and praying over them. Let the Bible have your first attention after you are dressed in a morning. Study it carefully, comparing passage with passage; you have the means of doing so now: you will find your references invaluable; and this method of studying the sacred volume is more decidedly advantageous than any other I know of. When you have thus given your most serious attention to this important work, (and never allow a wandering thought if possible while you are doing so,) kneel down with the blessed Book open before you, and pray over the passage you may have been meditating upon, and you will soon find the advantage of thus consulting God's revealed will. If done in a teachable frame, desiring to become better as well as wiser, the Holy Spirit will "take of the things of Christ, and show them unto you."

If you thus commence the day with God, he will take care of you, temptation will seldom find you off your guard, the tempter himself will flee from you. He will do his best to discover some method by which to entrap you; but I would urge you by every possible

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means to have this 'vantage ground, by making yourself familiar with the Scriptures; and, in doing so, you will be imitating Christ. You will then on every occasion be able to say, "Thus it is written, Get thee behind me, Satan," Luke iv. 8.

And here I would say a few words as to the length of time to be occupied in a morning in reading the Scriptures and prayer: never omit to give a full half hour to it after you are dressed, and more if possible. You may perhaps be inclined to think you are losing time, which you would wish to occupy in some other way, but if you conscientiously, sincerely, and perseveringly do this, be assured your heavenly Father will so smile upon and bless your other engagements, that you will be no loser in the end. When you are not too much fatigued, (and you ought never to be so,) close the day in the same profitable way; but never, on any account, or any occasion, neglect to commit yourself to God in prayer before you close your eyes in sleep. You may think I am very particular about this matter; I desire to be so, it is the stronghold of the Christian, and most especially of the young Christian. During the day, while engaged in your ordinary occupations, often raise your heart to him who "seeth in secret," Matthew vi. 4; ejaculatory prayer is of great importance to those who are tempted. Nehemiah "prayed to the God of heaven" while standing before King Artaxerxes. He did not pray in words, but his heart went out to God, Neh. ii. 4.

Again, I must give you a word of advice respecting the temptation of yielding to the solicitations of your fellow-apprentices, to which you particularly refer as being peculiarly dangerous. Be firm and uncompromising at the first, and you need not fear them; when they find you steadily fixed in your determinations to be conscientious, and to serve God with your whole heart, and according to the knowledge you have, they will let you alone. They may ridicule you and your religion; no doubt they will, and you have greater reason to fear falling by this means than any other, therefore pray to be supported; the shafts of ridicule are the most difficult to ward off; but while they ridicule you, they must respect both you and your conscientious determination to do your duty. Never for a moment hesitate if asked to visit a billiard or card room, or dram shop; always have something better to occupy your attention, and let your shop-mates know it. Have none as your companions but those who are regularly seen in the house of God, and in attendance on every means of grace within their reach. If once you yield, the victory to you is lost, perhaps for ever, and Satan has gained a new agent in you. Never have more than one or two familiar friends, and try them well before you trust them.

W. B.

WAR.

War, though arrayed in scarlet, emblazoned with banners, and attended with drums and trumpets, with all its shouts of victory, its extended conquests, and its glittering glory, is still the blackest plague-spot of sin, the ally of Satan. Engendered by the lustful covetousness of the human heart, it spreads its blasting influence and ruthless desolation. Its presence is a curse, its breath is cruelty, and its progress inseparable from sighs and tears, and libations of human blood. "Whence come wars and fightings among you? come they not hence, even of your lusts that war in your members?"

Such is war in its origin and its elements, its object and its influence. Well, then, may we turn from its turbulent delusions, and heart-sickening enormities; from the sins it has committed, and the sorrows it has inflicted upon the world, to the healing influences of the gospel of peace. Fallen as sinful man is from the glory of his first creation, how different does he appear, even now, when urged by evil passions, and when restrained by Divine grace! When despising the law of his Maker he breathes persecution and slaughter against his fellow-creatures, what a contrast does he present to what he is when animated by Christian benevolence, and the language of his heart is, "Glory to God in the highest, and on earth peace, good-will towards men."

But though it be well to abhor contention and blood-shed, and to "follow after the things which make for peace," though it be well to live in peace "one with another," and to seek that "peace of

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God which passeth understanding," yet is there a war in which every true disciple of Christ must engage. This is the crusade against evil, the holy war against sin that must be incessantly pursued. "War to the knife," cried out a warrior, "against the enemies of our country." "War unto death," cries the Christian, "against the enemies of our souls."

"I delight," said the apostle, "in the law of God after the inward man; but I see another law in my members, warring against the law of my mind, and bringing me into captivity to the law of sin." This is the contention that we must maintain: every sincere seeker after peace must engage in this war.

This is a war of the members against the mind; the flesh against the spirit; darkness against light; evil against good; earth against heaven; Satan against God! We have every thing to hope or to fear; all to lose or to gain; defeat is irrevocable ruin, and victory is never-ending gain.

It is a fearful thing to cast a glance over the field when the battle is set in array, and opposing armies are ready to rush forward into the sanguinary strife! and still more fearful to be a gazer when the conflict has begun; when the trampling of iron hoofs, the clashing of swords, and the roaring of cannon are mingled with the shouts of the charging hosts, and the dying and the dead lie scattered on the ground.

It is not a battle-plain of this kind on which the Christian warrior is called to contend, yet does his heart, at times, sink within him when confronted by his manifold foes. He has declared war against sin, and all the powers of sin and darkness have declared war against him. No quarter is to be given on either side; the Christian must slay or be slain, conquer or be conquered. He has drawn the sword, and flung the scabbard to the winds. He must fight out the battle; for in this war there is no truce, and no discharge will be granted.

Let us look for a moment on the host that is gathered to oppose him: the world, the flesh, and the devil. These great captains lead on their countless hosts—numberless temptations. Covetousness comes on the head of his golden standards. Pride with all his trappings advances with his troops; and the lust of the flesh, the lust of the eye, and the pride of life, are joined together as a threefold cord not easily to be broken.

Then come a crowd of terrors to shake the Christian's soul, a fearful train of coming judgments, a carnal mind, that is ever at enmity with God, and an array of thoughts and imaginations of the heart, that are evil continually.

These, and many more such opponents, without limit to their number, has the Christian to withstand. Art thou affrighted, feeble follower of the Redeemer! Take courage, though thy enemies be countless as the sands; more are they that are for thee than those that be against thee. Thou hast the people of God on thy side, armed with prayers which, through faith, are mighty to pull down the strongholds of the adversary. Thou hast innumerable saints and angels, a great multitude which no man can number, of all nations, and kindreds, and people, and tongues. Thou hast the whole army of martyrs, and goodly and precious promises without end, all yea and amen in Christ Jesus. Thou hast the word of the Eternal with thee, flying as a flaming angel to overthrow thy foes, and to comfort thy heart. And, lastly, thou hast thy Leader, the Lord Jesus Christ himself, the Captain of thy salvation, going before thee in the glorious warfare. His example speaks, his voice animates, his Spirit enters thy heart, to sustain, revive, and encourage thee; he points to "the blood-stained banner of his cross," and promises that thou shalt be more than a conqueror through Him who has loved thee, and lived and died for thee. Take courage, feeble follower of the Redeemer! On! Christian on! Tread in thy Leader's steps. Be faithful unto death, and a crown of eternal life shall be thine!

GEOGRAPHICAL DISTRIBUTION OF GRASSES.

A detailed representation of the distribution of the cultivated gramina* would certainly be very interesting. Here we must restrict ourselves to a short and general outline. We shall endeavour to specify those gramina which are the prevailing ones in the large zones and continents, mentioning, in passing, those plants of other families which

* The natural order embracing the different varieties of grass from the gigantic Bamboo to the thread-like Fescue-grass of the sheep walks.

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either supply the place of, or are associated with the different kinds of grain, as the chief article of food. The distribution is determined, not merely by climate, but depends on the civilisation, industry, and traffic of the people, and often on historical events.

Within the northern polar circle, agriculture is only found in a few places.

In Siberia, the cultivation of grain reaches at the utmost only 60°, in the eastern parts scarcely above 55°, and in Kamtskatka there is no agriculture even in the most southern parts (51°.) The polar limit of agriculture on the north-west coast of America appears to be somewhat higher; for, in the more southern Russian possessions (57° to 52°,) barley and rye come to maturity. On the east coast of America it is scarcely above 50° to 52°. Only in Europe, namely, in Lapland, does the polar limit reach an unusually high latitude (70°.) Beyond this, dried fish, and here and there potatoes, supply the place of grain.

The grains which extend farthest to the north in Europe are barley and oats. These, which in the milder climates are not used for bread, afford to the inhabitants of the northern parts of Norway and Sweden, of a part of Siberia and Scotland, their chief vegetable nourishment.

Rye is the next which becomes associated with these. This is the prevailing grain in a great part of the northern temperate zone, namely, in the south of Sweden and Norway, Denmark, and in all the lands bordering on the Baltic; the north of Germany, and part of Siberia. In the latter, another very nutritious grain, buck-wheat, is very frequently cultivated. In the zone where rye prevails, wheat is generally to be found; barley being here chiefly cultivated for the manufacture of beer, and oats supplying food for the horses.

To these there follows a zone in Europe and Western Asia, where rye disappears, and wheat almost exclusively furnishes bread. The middle, or the south of France, England, part of Scotland, a part of Germany, Hungary, the Crimea, and Caucasus, as also the lands of middle Asia, where agriculture is followed, belong to this zone.

Next comes a district where wheat still abounds, but no longer exclusively furnishes bread, rice and maize becoming frequent. To this zone belong Portugal, Spain, part of France on the Mediterranean, Italy, and Greece; further, the countries of the east, Persia, Northern India, Arabia, Egypt, Nubia, Barbary, and the Canary Islands; in these latter countries, however, the culture of maize or rice towards the south, is always more considerable, and in some of them several kinds of Sorghum, *Doura*, and Poa Abyssinica,* come to be added. In both these regions of wheat, rye only occurs at a considerable elevation; oats, however, more seldom, and at last entirely disappear; barely affording food for horses and mules.

In the eastern parts of the temperate zone of the Old Continent, in China and Japan, our northern kinds of grain are very unfrequent, and rice is found to predominate. The cause of this difference between the east and the west of the Old Continent appears to be in the manners and peculiarities of the people. In North America, wheat and rye grow as in Europe, but more sparingly; maize is more reared in the western than in the Old Continent, and rice predominates in the southern provinces of the United States.

In the torrid zone, maize predominates in America, rice in Asia, and both these grains in nearly equal quantity in Africa. In some situations, especially in the neighbourhood of the tropics, wheat is also met with, but always subordinate to these other kinds of grain. Besides rice and maize, there are, in the torrid zone, several kinds of grain, as well as other plants, which supply the inhabitants with food, either used along with them, or entirely occupying their place. Such are, in the New Continent, Yams, (*Dioscorea alata*,) the Manihot, (*Jatropa Manihot*,) and the Batatas, (*Convolvulus Batatas*,) the root of which, and the fruit of the Pisang, (*Banana Musa*,) furnish several articles of food. In the same zone, in Africa, Doura, *Sorghum*, Pisang, Manihot, Yams, and Arachis hypoyœa. In the East Indies, and on the Indian islands, Eleusine coracana, E'stricta, Pamicum frumentaceum; several Palms and Cycadere,† which produce the Sago; Pisang, Yams, Batatas, and the Bread-fruit, (*Artocarpus incisa*.) In the islands of the South Sea, grain of every kind disappears, its place being supplied by the Bread-fruit tree, the Pisang, and Tacca pinnatifida. In the tropical parts of New Holland, there is no agriculture, the inhabitants living on the

* The Meadow-grass of Abyssinia.
† Cycas, the Sago Palm.

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produce of the Sago, of various Palms, and some species of Arum.

In the highlands of South America there is a distribution similar to that of the degrees of latitude. Maize, indeed, grows to the height of 7200 above the level of the sea, but only predominates between 3000 and 6000 of elevation. Below 3000 feet it is associated with the Pisang, and the above-mentioned vegetables; while, from 6000 to 9250 feet, the European grains abound: wheat in the lower regions, and rye and barley in the higher; along with which as a nutritious plant, Chenopodium Quinoa, must also be enumerated. Potatoes alone are cultivated from 9260 to 12,300 feet.

To the south of the tropic of Capricorn, wherever agriculture is practised, a considerable resemblance to the northern temperate zone may be observed. In the southern parts of Brazil, in Buenos Ayres, in Chili, at the Cape of Good Hope, and in the temperate zone of New Holland, wheat predominates; barley, however, and rye, make their appearance in the southernmost parts of these countries, and in Van Diemans Land. In New Zealand, the culture of wheat is said to have been tried with success; but the inhabitants avail themselves of the Aerosticum furcatum as the main article of sustenance.

Hence it appears, that, in respect of the predominating kinds of grain, the earth may be divided into five grand divisions, or kingdoms. The kingdom of Rice, of Maize, of Wheat, of Rye, and, lastly, of Barley and Oats. The first three are the most extensive; the Maize has the greatest range of temperature; but Rice may be said to support the greatest number of the human race."—*Jameson's Philosophical Dictionary.*

PROOFS THAT MOSES WAS THE INSPIRED WRITER OF THE PENTATEUCH.

Let us notice,

1. *Name of these Books.*

All manuscripts and printed editions of the Hebrew sacred books begin with the five usually ascribed to Moses.

The more common Hebrew name of the Pentateuch is *the law;* so called, because these books contain the civil and ecclesiastical law of the Hebrew nation. The Hebrew name of the separate books was the first word or words in each.

The names in our English Bible are derived from the Greek translation, called the Septuagint, and were chosen by the Greek translators or editors as significant of the subjects or contents of the several books. Thus the first was called Genesis, because it gives an account of the origin, or *genesis* of the world; the second was called Exodus, because it contains a history of the going out, or *exode* of the Israelites from Egypt; and so of the rest.

2. *Authenticity of these Books.*

In investigating this subject, I take it for granted, that my readers know and acknowledge the following facts:—

1. That the books composing what is now called the Old Testament originated with the Hebrew nation, and were a part of their literature. This fact is as obvious and as well ascertained as any historical fact can be.

2. That these books were written at successive and distant periods of time, and were generally known, at least to the literary part of the nation, from their first publication. A simple inspection of the books, particularly in the original language, will make this fact as plain in reference to them, as it is in regard to any series of English writers from the reign of Henry VIII. to the present time.

3. That the leading historical circumstances alluded to in these books, such as the removal of the Israelites from Egypt, their establishment in Canaan, the institution of monarchy amongst them, &c., are matters of fact. This is sustained by all historical testimony; and, besides, it is a necessary consequence of the admission of the two preceding postulates.

One other preliminary remark is necessary to the subsequent argument.

The books of the Old Testament, particularly the first five, are alleged to be of higher antiquity than any other writings extant; and from the nature of the case, the validity of this claim must be ascertained or impugned by an examination of the books themselves, and not from contemporary sources, for, by the very statement, there are none. If a man were to affirm that he had spent twenty years entirely alone on a desolate island, you would judge what credit might be due to his story by a careful observation of his language and character, the consistency or inconsistency of his narrative, its agreement or disagreement with other facts known to you from other sources, and other circumstantial

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evidence of a similar kind; and you would not require him to bring witnesses to testify directly to the fact asserted, that they knew from personal observation that he had spent twenty years there entirely alone, because they had been with him all the time and had seen him.

Some infidel writers demand evidence in regard to the Bible, fully as inconsistent with the nature of the case as this would be; and it is on such groundless assumptions that the chief strength of their reasoning depends. From the very nature of the case, the early books of the Old Testament must stand or fall principally by internal evidence, by evidence drawn from the books themselves; and this, as I hope to show, is abundantly sufficient to place them above the reach of suspicion.

3. *Circumstantial Evidence that Moses was the writer of the Pentateuch.*

The question then recurs, Who was the writer of the first five books of the Old Testament?

Universal tradition ascribes them to Moses, the great lawgiver of the Hebrew nation. This is the undivided and uncontradicted testimony of Jews and Christians, orthodox and heretics, orientals and occidentals, Persians and Arabians, Greeks and Romans. It was first seriously called in question by Thomas Hobbes, about A.D. 1650, at least three thousand years after the first publication of the books.

We would observe, however, that in the second century after Christ, the small sect of the Nazarenes, rejected these books, not on any critical grounds, not that they ever attempted to prove them spurious, but merely because they disliked some of the doctrines supposed to be contained in them. It was to their religious authority, rather than to their genuineness, that the Nazarenes objected.

We inquire, then, Is there any thing in the books themselves, which contradicts, or throws suspicion on this unanimous testimony of antiquity? What is the circumstantial evidence in the case?

The whole character and structure of the books, all the circumstantial evidence, ratifies and confirms the testimony of antiquity, that Moses was the writer.

1. These books were evidently written by a Hebrew. The national language and peculiarities, and especially the strong national feeling everywhere manifested in these books, make this too obvious to be denied; and indeed it is universally admitted.

2. They were evidently written by a Hebrew who was well acquainted with every thing relating to ancient Egypt and Arabia, with the climate, soil, and productions of these countries, with their civil history, with the customs, modes of dress, and domestic manners of the inhabitants; and who was also familiar with the religion and science of ancient Egypt. Even a slight perusal of the books will satisfy any one who is competent to judge, that this is the fact.

Now, with this statement compare the life of Moses, as given in Exod. ii. iii. Moses was born in Egypt, and lived there forty years. He then went to Arabia, there married, and lived forty years in that country. He, therefore, had the best possible opportunity to become acquainted with every thing relative to the natural and civil condition of those two countries.

But how could Moses become familiar with the religion and science of ancient Egypt? Egyptian science was jealously guarded by a hereditary priesthood, and kept a profound secret even from native Egyptians of the lower orders, much more from slaves so oppressed and despised as the Hebrews were. The sacerdotal order was the highest rank of nobility in the nation; to it the king himself always belonged; and in order to learn any thing of the secrets of Egyptian wisdom, it was necessary to be on terms of personal familiarity with this proud and jealous class of nobles. (Compare Herodotus, book ii. c. 3, 100, 111, 164, 168, and Jahn's Hebrew Commonwealth, p. 24.) How could an enslaved Hebrew attain such an elevation? We know how this happened in regard to Moses. Exposed in early infancy, for the purpose of evading the cruel degree of a jealous tyrant, he fell into the hands of the daughter of the Egyptian king, and, adopted as her son, he became *learned in all the wisdom of the Egyptians.* Moses is the only Hebrew known, who ever possessed this advantage; and if no other Hebrew ever possessed this advantage, no other one could have written the Pentateuch.

3. The exact correspondence of narrative and institutions, shows that these books were written by the author of the institutions.

The institutions are not given continu-

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ously, fully, and in statute form. They are interspersed with the narrative, and inserted just as the exigencies arose which demanded them. Often they are at first but slightly sketched, and when afterwards they were misunderstood, they are repeated in more definite language and with full explanations.

For examples of the repetition and revision of laws, compare Exod. xxi. 2—7, with Deut. xv. 12—17; Numb. iv. 24—33, with Numb. vii. 1—9; Numb. iv. 3, with Numb. viii. 24; Lev. xvii. 3, 4, with Deut. xii. 5, 6, 21; Exod. xxii. 26, with Deut. xxiv. 6, 10—15; Exod. xxii. 16, 17, with Deut. xxii. 29.

None but the lawgiver himself, who wrote from day to day, as his laws became necessary, and revised them whenever circumstances called for a revision,* and recorded in the same book the exigencies that gave occasion to their enactment and revision, would have written in this manner.

4. The interrupted and broken manner in which the narratives and institutions are recorded, point to Moses as the writer.

Burdened with care, overwhelmed with business, beset with dangers at the same time from his own people and from their enemies, guiding a numerous nation, debased by slavery, through a trackless and barren wilderness, and preparing them for freedom and for intellectual and moral elevation, we might naturally expect that he could only write at intervals.

5. The difference between Deuteronomy and the other books corresponds with the fact that Moses was the writer.

Deuteronomy, unlike the other books, is written in a continuous, oratorical, and parental style. The patriarch speaks in the tones of authority and rebuke, just as we should suppose Moses might talk in his old age, after his journeyings and his perils were over, the responsibilities of government being committed to other hands, and when he was at leisure to speak out his whole heart to a nation which had grown up from childhood under his more than paternal care, and which had been the object of his constant solicitude and most intense exertions for more than half a century.

6. The extreme brevity and simplicity of the early parts of the narrative, and its gradual accumulation till the time of Moses, when it at once assumes a settled historical form, corresponds to the fact that Moses was the author.

7. The agreement of the books with each other, and the unity of design and of the mode of execution manifest throug the whole, favours the supposition of the authorship of Moses.

In short, so far as the books themselves are concerned, all the circumstantial evidence is to the same effect as the concurrent testimony of antiquity, and there is nothing at all against it.

4. *Direct Testimony that these Books were written by Moses.*

By this testimony, two points are to be proved, namely,

1. That the Hebrews, from the earliest times, have had books which were written by Moses.

2. That those were the same books which we now possess.

Before entering on the examination of this proof, turn back to the second head, and re-examine the three postulates there stated and conceded.

1. The first direct testimony on the two points above stated is, the declaration of the books themselves.

In Deut. xxxi. 9—13, 24—26, there is an express injunction, that the whole Mosaic code should be read to all the people assembled at Jerusalem at the feast of tabernacles every seventh year. If Moses wrote this precept, then the Mosaic books were generally read every seven years to the assembled Hebrew nation, from the time of the death of Moses till the termination of their national existence; for we know that the Hebrews generally were punctilious observers of the Mosaic laws, particularly of those which have reference to feasts and ceremonies. On this supposition, there is scarcely a possibility of deception or corruption.

If Moses did not write this precept, then there was a time subsequent to his death when it was first introduced. On this supposition, the introducer of it would have imposed upon himself the task of persuading all the adult citizens of his nation, that they had heard the law of Moses publicly read every seven years, when they had never heard any such thing; or that they had been wilfully guilty in neglecting one of the most explicit statutes of their civil and ecclesiastical code. Would such deception have been possible? Would not such a charge have excited to immediate inves-

* Of course, as divinely directed.—Ed.

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tigation, and investigation have led to immediate detection? Would any impostor needlessly interpose so insurmountable an obstacle to his own success?

Is it objected, that there were periods in the Hebrew history when the Mosaic law was neglected? I answer, never for so long a time that there were not thousands of Hebrew citizens living, who could remember the period when it was strictly observed. Never so generally, that there were not hundreds who carefully perused the Mosaic law in private, and scrupulously conformed their lives to it. Even during the worst times of Israelitish idolatry, Jehovah declared that he had reserved to himself seven thousand who had not bowed to Baal, (1 Kings xix. 18;) and during the long period of the Babylonian captivity, the Mosaic books and the writings of the subsequent prophets were to many pious Hebrews the chief solace of their afflictions, (Dan. ix. 2, 13.) Consequently, there has never been a time, since the death of Moses, when this precept could have been introduced. And if this precept was introduced by Moses himself, then there has never been a time when his laws could have been essentially corrupted or changed; for since the Hebrews have lost their national independence, the law of Moses has been read by them in its original language, in every quarter of the globe, every seventh day instead of every seventh year. What possibility, then, of practising such an imposition upon them has ever existed?

Not only have we direct testimony that the precepts and laws were recorded by Moses, (Exod. xxiv. 4, 7; xxxiv. 27,) but the historical narratives also were committed to writing in the same book and by the same hand, (Exod. xvii. 14, *in the book;* Numb. xxxiii. 1, 2.) The history, therefore, stands on the same ground with the statutes; and both always have been included, and are to the present day included, under the general name of *the law*, and *the book of the law*. The book of Deuteronomy is full of appeals to *this law*, and *the book* of *this law*, (xvii. 18, 19;) and in connexions where the reference is plainly to historical facts, and not to mere precepts, (xxviii. 61, compared with verses 59, 60; xxix. 19—27.) Thus far we have direct testimony from the books themselves.

2. The second class of direct testimony is that of the subsequent historical books. These continually refer to the books of Moses, as well known and familiar to the whole nation, from the time of the death of Moses to the termination of the Old Testament history. See Josh. i. 7, 8; xxiii. 6. Compare Josh. xxiv. 26, with viii. 32, 34. See also 1 Kings ii. 3; 2 Kings xxii. 8; 2 Chron. xxxiv. 14.

To prove that these references are made to the very same books of Moses which we now possess, nothing more is necessary than to make a careful comparison of the passages in the historical books with the passages alluded to in the Pentateuch. Thus, compare 2 Kings xiv. 6, with Deut. xxiv. 16. 2 Kings xxiii. 2—25, and 2 Chron. xxxv. 1—19, with Lev. xxvi. 3—45, and Deut. xxvii. 11, xxviii. 58. In this instance, the different precepts mentioned in the historical books as particularly observed by king Josiah, are scattered through various parts of the Mosaic books, and very extensively cover the ground in question.

Again, compare Ezra iii. 2—6, with Lev. vi. vii.; Ezra vi. 18, with Num. iii. 6—45; viii. 9—11, 14. Compare Neh. i. 7—9, with Lev. xxvi. 32, 33, 41; and Deut. iv. 26, 27; xxviii. 64; xxx. 3—5.

Thus every allusion in the historical books has its corresponding passage in the Mosaic books; and there is no discrepancy in this unbroken series of incidental and unsuspected testimony, continued through a period of more than a thousand years. The books of Moses were completed about the year 1451 B.C., and Nehemiah, the last historical book of the Old Testament, was not written till about the year 430 B.C. It is important to notice, also, that the series commences with Joshua, immediately after the death of Moses.

3. The series of prophetical books affords testimony, both as to the existence and identity of the five books of Moses, equally strong with that deduced from the historical books. To set this matter in a clear light, let us take a few of the earlier prophets, in the order of time, and compare their allusions to the Mosaic law with the Pentateuch as we now have it.

Joel lived about 650 years after Moses. Compare Joel i. 9, 13, with Lev. ii. vi. 14; Num. xv. 4, 5, 7; xxviii. 7, 14; Deut. xii. 6, 7; xvi. 10, 11.

Amos about 660 years after Moses. Compare Amos ii. 9, with Num. xxi. 21,

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24; iv. 4, with Num. xxviii. 3, 4; iv. 10, with Exod. vii—xi.; iv. 11, with Gen. xix. 24, 25; ix. 13, with Lev. xxvi. 5.

Hosea about 670 years after Moses. Compare Hosea ix. 10, with Num. xxv. 3; xi. 8, with Gen. xix. 24, 25; xii. 4, 5, with Gen. xxxii. 24, 25; xii. 12, with Gen. xxviii. 2; xxix. 20.

Isaiah about 690 years after Moses. Compare Isaiah i. 9—14, with Gen. xix. 24, and with various precepts; xii. 2, with Exod. xv. 2; li. 2, with Gen. xii. 2; xvii. 2; liv. 9, with Gen. viii. 21, 22.

Micah about 700 years after Moses. Compare Micah vi. 5, with Num. xxii. —xxix.; vi. 6, with Lev. ix. 2, 3; vi. 15, with Lev. xxvi. 16; Deut. xxviii. 33.

We might go on with the same process of proof through the remainder of the prophets and the whole series of the New Testament. Indeed, so constant is the reference, and so exact the coincidence, that if the Mosaic books were to be entirely destroyed, the sense of them might be gathered, to a great extent, from the subsequent parts of the Bible. Yet so great is the diversity of style and manner in these subsequent books, as to prove conclusively, that they must have been written by a succession of different men, in distant ages, of different habits, and in circumstances altogether diverse.

5. *Recapitulation of the argument.*

Thus in favour of the authenticity of the Mosaic books, we have the unanimous testimony of antiquity, with nothing in the books themselves to discredit it, and every thing to confirm it.

We have the direct testimony of the books themselves, confirmed by the whole series of national writers, through a period (including the New Testament) of about fifteen hundred years.

We have observed, also, the impossibility of imposition, interwoven as these books have always been with the civil history, the political institutions, the literature, and the religion of a proud and once powerful nation; who alone have survived the wreck of ages, and still exist, a living miracle in attestation of the truth of a religion which they despise and hate, suffering the full weight of the penalty denounced in their own sacred books against their own obstinate unbelief, and carefully preserving, as their pride and their treasure, the volume which pronounces the awful sentence of their own condemnation. (See Deut. xxviii. 15—68.)

Pagan testimony, so far as there is any, confirms the authenticity of the Mosaic books. We have all the evidence which the nature of the case admits, and tenfold more than that which satisfies us in regard to the writings of Homer or Herodotus; and even more than we have for the genuineness of the most distinguished writings in our own language, such as the works of Shakspeare and Milton.—*C. E. Stowe.*

THE THEATRE.

It must not be supposed that it is only the rigid and austere who have an ill opinion of the theatre. Men, who have scarcely a single sentiment in common on other subjects, agree on this. A volume would not contain all the authorities I might cite. The theatres of Athens were at one time such nuisances, that a law was passed requiring them to be closed. The Spartans, who paid such attention to every thing affecting the public morals, would not tolerate them in their city. At Rome, the profession of an actor was so infamous, that no one who sustained it could enjoy the rights of a citizen. It was customary for the early Christians, when they connected themselves with the church, to engage, by a special vow, to renounce pomps, shows, and all similar amusements. This kind of testimony might be extended almost at pleasure.

Hear a witness or two of more recent date. Archbishop Tillotson, in speaking of plays, declares them to be "intolerable, and not fit to be permitted in a civilized, much less a Christian nation. They do most notoriously minister to vice and infidelity. By their profaneness, they instil bad principles into the minds of men, and lessen that awe and reverence which all men ought to have of God and religion;" and Sir John Hawkins says, "Although it is said of the plays, that they teach virtue, and of the stage, that it is the mirror of human life, these assertions are mere declamations, and have no foundation in truth or experience. On the contrary, a playhouse, and the regions about it, are the very hot-beds of vice."—*S. R. Hall on Education.*

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OLD HUMPHREY ON FLOWER-SEEDS.

THERE appears to be a natural, or an acquired love of the wonderful in the human heart. No man who takes up his pen to write about the burning mountains of Vesuvius, Etna, and Catopaxi, the Pyramids of Egypt, the Falls of Niagara, the Caves of Elephanta, or the Icebergs of the Northern Ocean, need be under any serious apprehension that his readers will be few; but if, through the frequency of narration, even such subjects as these should fail to excite curiosity, there are others of never-failing interest ever at hand.

There is always some subject, more or less occupying and absorbing public attention; and whether this be the missing whalers, the Nassau balloon, the fire at the Royal Exchange, or Murphy's almanack, every line that is written thereon is with avidity devoured. The love of the wonderful is as epidemical as the small-pox; it runs, it revels, it rages, and every new wonder, like a wave of the ocean, takes the place of its predecessor.

It is possible that many may pass over the title chosen for my present remarks, who would have been arrested by a more wonderful announcement. Had I chosen an account of a sea-snake a hundred yards long, a terrible encounter between a bull and a buffalo, a desperate highway robbery on Blackheath, a fearful battle, a horrid murder, or a frightful, sudden death, every eye that fell on the wonderful announcement would have been spell-bound. As it is, I must be satisfied with readers of a calmer cast.

There is, and it cannot be denied, a feverish excitement, a turbulent gratification, in relating marvellous adventures; but much more delightful it is to tell of the lonely revellings we have had in the overhanging coppice, the secluded nook, the shadowy dell, and flowery dingle, where we have given way to our emotions without restraint, with no eye upon us save the eye of the Eternal!

It is, indeed, a treat in an hour of recreation, to give imaginary forms to the snowy sun-lit clouds of heaven; to gaze on the ripple of the pebbled brook; to trace the shadows of the overhanging brushwood in the deep, clear, motionless water of the miniature bay of a river, or to sit down on the brink of a ditch, gorgeous with straggling plants and autumnal foliage!

Then, again, there are secluded nooks, and shadowy dells, in the every-day occurrences of domestic life, that are dear to us all; little events, and private circumstances, that call forth our affections; and I had rather write you one chapter on such things, while my heart overflows with tender feelings, than ten chapters of overwhelming wonderment.

I have taken up my pen in a kindly mood, having just such an interesting little occurrence to relate as is after my own heart. Bear in mind that it is nothing wonderful, nor will there be any attempt on my part to make it so. If I were to try to be great and grand, wise and learned, I should deserve to be laughed at for my folly; but as I only seek to interest you with what has interested me, you must try to like my simple narration.

In the beginning of last year, I received a packet from one that I have a right to love. As absence often increases affection, so distance frequently gives value to a letter or a parcel. Absence and distance exercised their influence, and I opened my little packet with much complacency.

It contained small packets of flower-seeds, each packet labelled with the name of the seed it contained, with some remarks thereon; these remarks much pleased me, and it is because I entertain the hope of their pleasing others as well as myself, that I now venture to lay them before you.

The packets were neatly wrapped up, and the accompanying remarks were written in pencil, thereby setting forth of how little importance the writer considered them. You shall have the inscriptions as they are now before me.

Major Convolvulus.

"The prevailing colour of this flower is a deep heaven-like blue. Look upon it when you have the head-ache, or the heart-ache, or are under any mental excitement, for it is of a soothing and gently joyous nature, telling us of things calm and lovely, rather than of those which are gay and gladdening. It is not good to live ever in sunshine, nor desirable to remain always in the shade. Set the major convolvulus on each side the front door, that it may grow up a moderator of joy, and a soother of sorrow. You love to support the feeble; give my convolvulus a stick to lean upon, and he will hold up his head, and cheerfully thank you for the deed."

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Sweet Pea.

"Almost all plants of the curly, twirly, winding, twining class, are looked upon with tenderness, and with almost tearful eyes. The sweet pea, like unto the convolvulus, doth seem to love all things that its wiry, spiry stem can touch. I doubt me not that it would grow round your finger. You can try it if it pleaseth you, but at all events set my sweet pea, and if it twine itself not round your finger, it will, I know, for my sake, twine around your heart.

"It will grow on one side the garden gate, or against the palisades at the foot of the laburnum, and look lovely any where."

Gilly Flower.

"Common though the gilly (or July) flower be, despise it not: like the sweet William, it is the flower of the poor: you may look for the one and the other in the Sunday blue coat button-hole of aged Roger Blake, or in the broken blue jug in the alms-house window of Deborah Martin. It is called the wall-flower, and I have seen it peep out of perilous places, clinging to the high mouldering brick or stone wall. There is a little poetry in its clustering blossoms in such circumstances, but in its proper place, it groweth in the little garden of a cottage wherein dwelleth an aged man, or a lonely widow; set it in yours, perhaps it may never come up, but if it should, and you cannot love it for its own sake, love it for mine. A homely flower should have a homely name; if I clothe it with a botanical name, you will not thank me for my pains."

Lupin.

"This flower is a general favourite, and yet, I know not why, it never would have had much interest with me, only that it grew in my grandmother's garden. I like the gay and grand, or the retiring, the lovely, and delicate; and this, whether pink, blue, or yellow, doth not partake of these qualities. Set it, at any rate, for I have said enough to make you like it. It would be a pity, indeed, to undervalue that which is lively, and pretty withal, and beloved by everybody."

Marygold.

"There is nothing poetical about this flower; it thrusts up its round face like the dandelion, and stares in the sun's countenance with a most unflower-like boldness. In days gone by, I ate some of the petals of the flower in a basin of porridge, and ever since then, I have ranked it with pot-herbs. Set it, however, for it has a curious neatness and exactitude in its construction, and if you should ever pull it to pieces, you shall see what you shall see! Set it under the old wall, or any where else, so that it is a long way off my sweet pea, and my major convolvulus."

Carnation Poppy.

"Though not very commanding in size, this flower is gay and grand, and fit to be gazed on when the heart is full of some bright dream. It gives a moment of great assurance, almost seeming to promise what the heart desires. Set the seed, and if it springeth up, pluck a flower and place it before you, when fancy is required to paint the fair future in gorgeous colouring. Talk not of its fading nature, and of the hollowness of this world's promises; tell me not that you have had enough of 'Madam Bubble,' but set my carnation poppy, and we will talk together of its withered petals when they *are* withered."

Nasturtium.

"You cannot set too much of this; there cannot be too much of it in the garden. I have looked into the tangled and beauteous confusion of a cluster of nasturtiums, till mine eye has brimmed again with delight. It is a wilderness wherein a poet loveth to rove and revel. I like the leaf, and I love the flower. The smell of the plant, though it pleases not many, pleases me; there is a strangeness in it. Set it right liberally, and if you cannot love it, I will love it for you."

Hollyhocks.

"No garden should be without a hollyhock, whether it belong to a prince or a peasant: Stately and aspiring, and requiring space, it yet wisely accommodateth itself to its circumstances; adorning alike the gay parterre and the cottage door. Whether peuce, crimson, scarlet, yellow, or white, it is always elegant; never forget that it is a hollyhock! It reminds me of the foxglove of the fields, growing much after the same fashion; the fox-glove reminds me of the thistle, and both flowers remind me of you, for they were always favourites with you. See that you set my hollyhocks!"

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Mignonnette:

"And now I am come to my last packet. The mignonnette is not a flower to take with a stranger; but it is very dear to its friends. It promises nothing which it does not perform. It is not so gaudy as the tulip, nor so proud as the peony, neither hath it so prepossessing an appearance as the dahlia; but it surpasseth them all in its grateful influence, and loves to give pleasure even to those who despise it. Set it. I do not say love it, for you cannot help doing that. You have a neat green trough, or a painted pot; set it there: or you may put it in the little bed nearest the back window. Yes, that will do nicely, and when it springs up and perfumes the air, if you have nothing better to think of, think of me."

Now, there is in the above observations a sprightly playfulness, a fulness of meaning, and a tender affection, that exactly suit my disposition; I know not when a packet has given me greater pleasure. It is said that the Chinese have a language of flowers, and I wonder not at it, for there is much in them well calculated to express our thoughts.

So long as I have been employed in noting down the remarks of another on flowers, and flower-seeds, I have felt strong; but now that I come to put down my own observations, I feel shorn of my strength. A child that walks well in leading-strings, totters without them. I want words as playful, and thoughts as pleasing, as those that I have recorded, but I cannot find them; and yet for all that, the inscriptions on the packets are so much in unison with my affections, that I feel as though I had almost a right to call them my own.

You have felt, perhaps, something like this spirit of appropriation before now, at a Bible or Missionary Meeting, when some highly gifted speaker, as popular for the warmth of his heart as for the eloquence of his tongue, has carried you away captive at his will, and made your bosom burn again, in setting forth, in glowing language, the immeasurable goodness of God, and the triumphs of the ever-blessed gospel!

You could not speak like him, but you felt like him. Not a sentiment did he express that was not your own, and at the moment, setting aside all distinctions of rank and talent, all restrictions of etiquette and custom, you could have burst forward to take him by the hand, as a Christian brother who had given utterance to the pent-up emotions of your heart.

I scarcely need say, that the flower-seeds were set. Some of them flourished; and others of them died without coming to maturity, but they all live in my remembrance. While I write these remarks, a sprig from one of them is sticking in my bosom.

Tell me not that there is nothing to be gathered from these remarks; for I think otherwise. I should feel grateful to him who could teach me to look on a daisy, ay, on a blade of grass, with an added interest. The more we see God in his works, the more shall we trust him in his ways; for if He so adorns the flowers of the garden, so clothes "the grass of the field, which to-day is, and to-morrow is cast into the oven, shall he not much more clothe you, O ye of little faith?"

When we look on the flowers that we have set, and watered, and watched over, in a right spirit, we regard them as God's handywork, and, uniting wonder with thankfulness, feel, whether or not we express it, "that even Solomon in all his glory was not arrayed like one of these."

It is unnecessary, after the inscriptions I have given, for me to enlarge on the subject of flowers; my closing remarks shall be, therefore, brief. In passing through the garden of life, I have met with friends of many kinds, with major convolvuluses, gentle spirits, that have gladdened my eyes and my heart; with sweet peas, tender, affectionate, and loveable; with gilly flowers, homely, pleasant, and excellent; with lupins, common-place, but ever welcome; with marygolds, busy, bustling, and good-natured; with carnation poppies, florid and hopeful, always painting the future in sunshine; with nasturtiums, eccentric, talented, and exciting, making me glad to be alive; and with consistent hollyhocks, so adorning their pathways by their graces, that I have loved them, and longed to be like them. To these must be added others of the true mignonette class, professing little, and doing much; making themselves to be felt rather than observed, and unobtrusively spreading their kindliest influence around.

I will now put by my inscriptions, though most likely, if life be spared.

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they will be again and again deciphered, as the spring flowers shall put forth, as the singing of birds shall come, and as the voice of the turtle shall be heard in the land.

If these thoughts on the subject of flowers and flower-seeds should appear to you to be worthless, let them be blotted out with more worthy speculations, and I shall be glad to have called forth in your mind more profitable reflections than those which have occurred to my own.

THE BOTANIST.—No. IV.

Fig. 48.

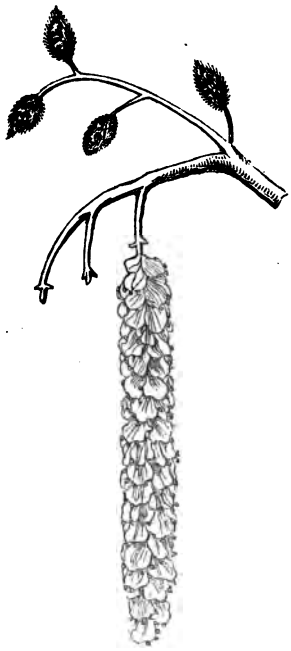

Fig. 49.

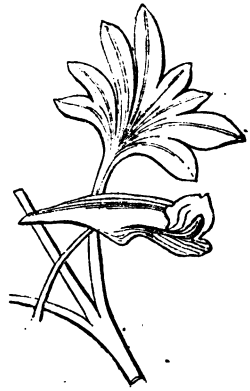

Fig. 50.

THE second subdivision of the Linnean system places all plants in *genera*, or families. The generic characters, or family features, are found in the parts of fructification, that is, in the different parts of the flower. These are the CALYX, COROLLA, STAMEN, PISTIL, which were described in No. II. of these papers; also the SEED, PERICARP, RECEPTACLE.

It will be necessary to glance at the varieties of the Calyx, of which there are seven. It is called,

PERIANTHIUM. When situate near the flower, it permanently answers the purpose of protection; and when placed below the fruit and flower, it is called the perianthium of the fructification, as in the primrose tribe.

When placed above the fruit, it is called the perianthium of the flower; it is either one-leaved, as in *solanum*, or many-leaved, as in *stellaria*. The student must be careful not to confound the one-leaved perianthium with the many-leaved, as some are so deeply divided as to appear as if they were composed of several distinct leaves, which, if examined to the base, will be found but one.

In compound, that is syngenesious flowers, the perianthium is termed *common*, because it encloses many florets, as in the sun-flower. The calyx is also termed,

INVOLUCRUM, which is the calyx of the umbelliferæ. It generally consists of five leaves, situate at the base of the

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umbel, or the *umbellules*: in the former case it is called the general involucrum, and in the latter, the partial.

SPATHA, a sheath, is that kind of calyx which belongs to most bulbous rooted flowers; as Narcissus. It is of one piece, and envelops the flower, previously to its opening.

AMENTUM, or catkin, is the calyx of the Fir tribe, *Pinus*, also of the Alder, (see fig. 48.) Birch, Hazel, &c. It is composed of numerous scales, overlaying each other, between which are the stamens and pistils.

GLUMA, a husk, is the calyx of grasses, consisting of two or three scales, frequently terminated with an awn or beard, as in barley, etc., and fig. 2. In *Stipa pennata*, the feather grass, the glume is terminated with an awn more than a foot in length, gracefully drooping, and covered with hairs, and resembling the feathers of the Bird of Paradise.

The other kinds of calyx occur only in the class Cryptogamia; they are,

VOLVA, a wrapper, the covering of fungi, or mushrooms, etc., and

CALYPTRA, the calyx of the mosses.

The Corolla is the next part made use of for generic distinctions. It is either one-petalled, *monopetalous*, (fig. 25,) or many-petalled, *polypetalous*, (fig. 5.)

A monopetalous corolla has two characteristic parts; namely, the *border*, or extremity, and the *tube*. In shape it may be

CAMPANULATE, or bell-shaped, as in the *Atropa Belladonna*, (fig. 25,) and the genus Campanula.

SALVER-SHAPED, *Hypocrateriformis*, as in the periwinkle.

GAPING, *Ringens*, as in dead-nettle, (see fig. 14.) The upper and lower parts are called lips, *labiæ*, and the space between them the mouth, *faux*; nearly all are of the class Didynamia.

PERSONATE, *Personata*, resembling the above, but the *faux* is closed, as in snapdragon, *Antirrhinum*.

In a polypetalous corolla, each petal has two parts; the narrow part by which it is attached is called the claw, *unguis*, the broader part, or extremity, the limb, *lamina*. (Fig. 50.)

The polypetalous corolla is either regular or irregular. Regular, when all the petals are alike in shape and size; Irregular when they differ in either of those particulars; as in the pea tribe, orchis, aconite, and many of the Umbelliferæ.

The *cruciform* corolla is very frequent. All flowers of the class Tetradynamia are of this shape: the four petals being in the form of a cross. These plants compose a very large and important, and truly natural family, called Cruciferæ. A caution before given, when speaking of the calyx, must here be repeated, as applicable to the corolla, namely, that a monopetalous corolla be not mistaken for a polypetalous one; they are often so deeply divided as to mislead upon merely a slight glance. Veronica, (fig. 2,) is a monopetalous corolla, but so deeply divided into four segments as to resemble four petals.

Besides the parts of the flower already mentioned, there is another met with frequently, though not in all plants: it is the *Nectary*, or honey-cup. It may be seen in the aconite, *Aconitum*, in the columbine, *Aquilegia*, and in the Narciss, where it is of a cup-shape. It has many forms, but this need not puzzle the student; for wherever he finds in a flower an organ in addition to the seven mentioned, it will be a *Nectarium*.

The Stamens described in No. 11. afford many distinctive marks. 1. As to their situation, whether on the calyx, as in the apple blossom, on the receptacle, as in the lily, on the corolla, as in the convolvulus and atropa, (fig. 25,) or on the style, as in the orchis tribe, (fig. 42.) 2. As to the length of the filament, which is very various, being in some plants hardly perceptible, and in others, as the white Marvel of Peru, and the *Colchicum*, or autumnal crocus, and Cactus, very long. The anther, also, is of different forms, placed in various ways upon the filament; in the passion flower it is wonderfully balanced as on a pivot, which causes a tremulous motion, and thereby the distribution of the farina is insured.

The pollen, or farina, also differs in colour and form. It is more frequently yellow, but in the tulip is black, in the Chalcedonian lily, of a beautiful scarlet, and white in the polygonum; but this would not constitute a generic difference. Farina is the object of the bee's industrious search, and the material she uses with such astonishing skill, when "she builds her cell."

The parts of the Pistil have also been previously noticed as being three in number, namely, the *stigma*, the *style*, and the *germen*. The form of the stigma seems to be useful in distinguishing

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some of the genera: in some, as the crocus, it is divided; in some round, as the cowslip; in some, of the same shape as the style, as *Symphytum*, the comfrey; saffron, which is used medicinally, is the stigma of the *Crocus sativus*.

The STYLE, it appears, is not essentially necessary to the perfection of the seed, as in many instances there is no style, the stigma being placed immediately upon the germen, as in the common poppy.

The GERMEN is the destined seed-vessel situated at the bottom of the styles; it is called superior, *superum*, or inferior, *inferum*, according as it is placed above or below the fruit. The germen, as we said, becomes the seed-vessel.

PERICARPIUM. It assumes different forms, and has different names, which shall be enumerated, as they are an important feature in the discrimination of the genera.

CAPSULE, *Capsula*, the most general description of pericarpium. It is generally a dry, hollow, seed-vessel, dividing when ripe, sometimes at the top, sometimes at the bottom, for the purpose of scattering the seeds. The poppy-head of the shops will exemplify a capsule divided into cells.

SILIQUA is a kind of pod, pretty much confined to the Cruciferæ, in which the seeds are fixed alternately upon each valve, or suture, as in the cabbage tribe, (fig. 34.)

SILICULA differs only in form, as described in No. II. (See Tetradynamia siliculosa, fig. 35.)

LEGUMEN, is the proper pod, having two valves, with the seeds fixed along one valve only, as in the pea, &c.

DRUPA is a stone-fruit, as the plum, apricot, peach, &c.

POMUM, an apple, a fleshy pulp enclosing a membranous capsule, with cells containing the seeds.

STROBILUS, a cone, is the pericarp of the fir tribe, etc.

Lastly, the RECEPTACLE enters into the generic character; it is either an umbel, a spike, or a sheath, *spadix*.

In form it is flat, conic, awl-shaped, chaffy, hairy, etc.

Having shown what constitutes the generic character, we will now endeavour to illustrate the method to be pursued, in order to discover what is the generic name of a plant. Let us take the rose. First, the *class* must be determined; the stamens are numerous, and fixed on the calyx, it therefore belongs to Icosandria. Next the *order*; the styles are numerous, we place it therefore in Polygynia. Now for the *generic* marks.

The CALYX is a perianthium of five leaves, which are spreading, oval, and sharp-pointed.

The COROLLA is of five petals, reversely heart-shaped, inserted into the neck of the calyx.

STAMENS, the filaments are numerous, hair-like, short, inserted into the neck of the calyx.

PISTILS, germs many, in the bottom of the calyx, styles of the same number, somewhat hairy, very short, inserted into the side of the germ, stigma obtuse.

PERICARP, a berry, fleshy, one-celled, contracted in the neck.

SEEDS, many, oblong, bristly, fixed to the inside of the pericarp.

It is now necessary that the student should possess a descriptive catalogue, having the generic and specific characters of each plant; then he will be able, by alternate reference to the descriptions, and to his specimen, easily to determine its name. "Withering's Account of British Plants, abridged by M'Gillivray," is easily attainable, and contains an excellent description of every British plant, except such as belong to the class Cryptogamia.

We have here given the generic character of one plant, as an example of the application of the foregoing descriptions: our limits in the present number will not allow us to enlarge on this particular; but we would recommend the student, having a catalogue, to try his skill in reconciling written descriptions with the parts and combined character of actual specimens; the task will be found more easy in experiment than he may at first expect.

We add a list of the *Genera*, some of whose individuals will contribute to adorn the landscape in this delightful season, justly termed "Nature's birth-time." Some preserve from contempt the otherwise naked and cheerless stone wall; some lend a pleasing air of variety to the beautiful green meadows; some, emerging from their snug covering of leaves, and declining any longer the shelter of low bushes, fern, and long dry grass, burst forth fearlessly, and with the gayest and purest colours, or the most delightful odours, enrich the "banks and braes," the heath and the

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copse. Now is the time to sally forth; there is a secret influence in the spring, which the summer does not, with all its advantages impart, whether it be that having been so long without these enjoyments, we prize them more highly when first they recur; or whether it is that the frosts of winter having purified the earth, and consequently the atmosphere, make it really more cheerful and bracing: however, it is undoubtedly a season when all who have reason, and senses, and legs, should walk abroad. Those who continue in their usual course of confined business, without any relaxation of this kind, can hardly be aware of the enjoyment, nay, the blessings they lose. To pursue the avocations of life so intensely as to neglect the works of the great Creator, and to withhold the tribute of love and praise which they demand from all rational beings, is conduct unworthy of an intelligent creature, and especially of a professed Christian.

IN FLOWER IN APRIL.

The figure indicates the number of species.

In MONANDRIA.

Callitriche, water-star-wort, 1

DIANDRIA.

Fraxinus, the ash, 1
Veronica, speedwell, 3

TRIANDRIA.

Valeriana, corn salad, 1
Eriophorum, cotton-grass, 3
Agrostis, bent grass, 1
Alopecurus, fox-tail grass, 1
Holosteum, umbelliferous chickweed, 1
Montia, blinks, 1

PENTANDRIA.

Cyclamen, cyclamen, 1
Viola, violet, 8
Ribes, currant and gooseberry, 3
Primula, primrose, cowslip, etc., 3
Chærophyllum, cow parsley, 1
Gentiana, gentian, 1
Ulmus, elm, 2
Alsine, chickweed, 1

HEXANDRIA.

Asperugo, madwort, 1
Juncus, rush, 2
Narcissus, Narciss, etc., 1
Fritillaria, snakes-head
Ornithogalum, Star of Bethlehem, 2
Scilla, squill and hare-bell, 2
Tulipa, tulip, 1.

OCTANDRIA.

Polygonum, persicaria, 1
Adoxa, Moschatel, 1

DECANDRIA.

Saxifraga, London-pride, etc., 1
Oxalis, wood-sorrel, 2
Cerastium, mouse-ear, 2

DODECANDRIA.

Euphorbia, spurge, 2

ICOSANDRIA.

Potentilla, cinquefoil
Prunus, plum, cherry, etc., 3
Pyrus, crab, pear, &c., 3

POLYANDRIA.

Anemone, wind flower, 4
Ranunculus, buttercups, 2
Helleborus, hellebore, 2

DIDYNAMIA.

Lathræa, toothwort, 1
Glechoma, ground ivy, 1
Lamium, dead-nettle, 3

TETRADYNAMIA.

Arabis, wall-cress, 1
Cardamine, cuckoo flower, 3
Dentaria, tooth wort, 1
Erysimum, hedge mustard, 1
Lepidium, cress, 1
Thlaspi, shepherd's purse, 1

MONADELPHIA.

Geranium, crane's bill, 1

DIADELPHIA.

Fumaria, fumitory, 1. Fig. 49, on p. 140.

SYNGENESIA.

Leontodon, dandelion or gowans, 1
Tussilago, coltsfoot, 3

GYNANDRIA.

Ophrys, ophrys, 1
Orchis, orchis, 1

MONŒCIA.

Carex, sedge, 5
Betula, birch and alder, 2
Buxus, box, 1
Fagus, beech, 1
Corylus, hazel, 1
Quercus, oak, 2

DIŒCIA.

Salix, willow, osier, etc., 15
Ruscus, butcher's broom, 1
Populus, aspen, 1
Mercurialis, dog's mercury, 1
Taxus, yew, 1.

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DIFFUSION OF HEAT OVER THE GLOBE.

In considering the laws which regulate the diffusion of heat over the globe, we must be careful, as Humboldt well remarks, not to regard the climate of Europe as a type of the temperature which all countries placed under the same latitude enjoy. The physical sciences, observes this philosopher, always bear the impress of the places where they began to be cultivated; and, as in geology, an attempt was made to refer all the volcanic phenomena to those of the volcanoes in Italy, so in meteorology, a small part of the old world, the centre of the primitive civilization of Europe, was, for a long time, considered a type to which the climate of all corresponding latitudes might be referred. But this region, constituting only one-seventh of the whole globe, proved eventually to be the exception to the general rule.

It is now well ascertained, that zones of equal warmth, both in the atmosphere, and in the waters of the ocean, are neither parallel to the equator nor to each other. It is also known, that the mean annual temperature may be the same in two places which enjoy very different climates, for the seasons may be nearly uniform or violently contrasted, so that the lines of equal winter temperature do not coincide with those of equal annual heat, or isothermal lines, or those passing through places having the same mean annual temperature.

The deviations of all these lines from the same parallel of latitude are determined by a multitude of circumstances; among the principal of which are the position, direction, and elevation of the continents and islands, the position and depths of the sea, and the direction of currents and of winds.

On comparing the two continents of Europe and America, it is found that places in the same latitudes have sometimes a mean difference of temperature, amounting to eleven degrees; or even in a few cases, to seventeen degrees, Fahr.; and some places on the two continents, which have the same mean temperature, differ from seven to thirteen degrees in latitude.

The principal cause of greater intensity of cold in corresponding latitudes of North America and Europe, is the connexion of North America with the polar circle, by a large tract of land, some of which is from three to five thousand feet in height, and, on the other hand, the separation of Europe from the polar circle by an ocean. The ocean has a tendency to preserve every where a mean temperature, which it communicates to the contiguous land, so that it tempers the climate, moderating alike an excess of heat or cold. The elevated land, on the other hand, rising to the colder regions of the atmosphere, becomes a great reservoir of ice and snow; arrests, condenses, and congeals vapour, and communicates its cold to the adjoining country. For this reason, Greenland, forming part of a continent which stretches northward to the eighty-second degree of latitude, experiences under the sixtieth parallel a more rigorous climate than Lapland under the seventy-second parallel.

But if land be situated between the fortieth parallel and the equator, it produces, unless it be of extreme height, exactly the opposite effect; for it then warms the tracts of land or sea that intervene between it and the polar circle. For the surface being in this case exposed to the vertical, or nearly vertical rays of the sun, absorbs a large quantity of heat, which it diffuses by radiation into the atmosphere. For this reason, the western parts of the old continent derive warmth from Africa, "which, like a great furnace, distributes its heat to Arabia, to Turkey in Asia, and to Europe." On the contrary, the north eastern extremity of Asia experiences in the same latitude extreme cold; for it has land on the north, between the sixtieth and seventieth parallel, while to the south, it is separated from the equator by the Indian Ocean.

In consequence of the more equal temperature of the waters of the ocean, the climate of islands and of coasts differs essentially from that of the interior of continents, the more maritime climates being characterized by mild winters, and more temperate summers; for the sea-breezes moderate the cold of winter as well as the heat of summer. When, therefore, we trace round the globe those belts in which the mean annual temperature is the same, we often find great differences in climate; for there are *insular* climates, in which the seasons are nearly equalized, and *excessive* climates, as they have been termed, where the temperature of winter and summer is strongly contrasted. The whole of Europe, compared with the

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eastern parts of America and Asia, has an insular climate. The northern part of China, and the Atlantic region of the United States, exhibit excessive climates. "We find at New York," says Humboldt, "the summer of Rome, and the winter of Copenhagen; at Quebec, the summer of Paris, and the winter of Petersburg; at Pekin, in China, where the mean temperature of the year is that of the coasts of Brittany, the scorching heats of summer are greater than at Cairo, and the winters as rigorous as at Upsala."

If lines be drawn around the globe, through all those places which have the same winter temperature, they are found to deviate from the terrestrial parallels much farther than the lines of equal mean annual heat. The lines of equal winter in Europe, for example, are often curved so as to reach parallels of latitude nine or ten degrees distant from each other, whereas the isothermal lines differ only from four to five degrees.—*Lyell.*

THE ABORIGINES OF NEW SOUTH WALES.

To the Editors of the Visitor.

Some original and interesting papers in reference to the Aborigines of New South Wales, have been placed in my hands, and as they illustrate the remarks in a letter I sent you on the state of the uncivilized tribes generally, (page 94,) a few extracts from them may be acceptable to your readers.

The colony of New South Wales was established for the purpose of receiving those criminals who, for their crimes, were thought unfit to remain in their native country. By removing them to a country far away from all the comforts of life, and subjecting them to hard labour, it was hoped that they might be reclaimed from their vicious habits, and at the expiration of their term of transportation return to the mother country, reformed in heart and life. This anticipation has not, however, been realized, as is well known; for the convicts encourage each other in crime, and, by their daring wickedness, have tainted the moral atmosphere of the community among whom they are suffered to live.

The practice of transporting criminals was commenced in the reign of James I., and in the year 1619 they were sent to America. When that country asserted its independence, in the year 1776, the convicts were sent to the British possessions, on the coast of Africa; but it was soon found, that as the climate was extremely unhealthy, some more salubrious country must be found; and a part of the south-eastern coast of New Holland, examined by Captain Cook, and called Botany Bay, was chosen. Six transports and three store ships were consequently fitted out, and on the 13th of May, 1787, the little fleet set sail, with 757 convicts, 565 men, and 192 women. On the 20th of January, 1788, the vessels arrived at their place of destination, having performed the voyage in eight months and one week, with a loss by death of thirty-two persons during that period. The same voyage is now generally performed in about half the time.

As Botany Bay was not found to be so suitable for the purposes of the colony as was at first expected, the adjacent harbours of Port Jackson and Broken Bay were examined. In one of the coves of the former a spacious harbour was observed, and into this vessels were brought, and the troops and convicts were landed. The only thing considered as necessary to give these persons a right to the soil was the hoisting of a union jack. From the moment this was done, the land was appropriated to the use of the British Government, and the natives were no longer allowed to possess the soil which had been transmitted to them by their forefathers.

A few days after the party had landed, the governor was proclaimed, at which time he took the opportunity of addressing the convicts, assuring them that "he should ever be ready to show approbation and encouragement to those who proved themselves worthy of them by good conduct; while, on the other hand, such as were determined to act in opposition to propriety, would inevitably meet with the punishment they deserved." A few days, however, were sufficient to undeceive those who expected a sudden reformation of conduct from transportation. The greatest enormities soon prevailed among these depraved beings. Drunkenness, petty theft, and other crimes were so common, that vigorous measures were absolutely necessary as warnings to others.

The natives, who evinced a kind disposition towards the Europeans, did not long escape the ill-treatment they so

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little expected, but which has hitherto in all instances attended colonization.

The spears and other instruments used by the Aborigines in hunting and fishing were stolen, their persons were molested, and of course their confidence was lost. Nor was this all; for they stole in return whatever came in their way, and attacked, in some instances, the unprotected European who had strayed from the location. The ill-feeling which had thus sprung up between the natives and settlers, was aided by a misunderstanding between the former and the French navigators; for at that time two French vessels, under the command of M. de la Perouse, fitted out on a voyage of discovery, were lying in Botany Bay. The French sailors had, it appears, been annoyed when on shore by the natives, and fired on them.

The history of the colony from this period to the present moment, affords numerous instances of the depravity of the wretched creatures for whose benefit it was established, and of the evils suffered by the poor Aborigines. I will, however, proceed to give you some specimens of the present state of both these classes of men in the colony of New South Wales.

A gentleman who has had a good opportunity of becoming acquainted with the character and condition of the Aborigines of New Holland, and of comparing the moral and physical condition of those tribes who have lived under the influence of European example with those who reside far in the interior, and have had little or no intercourse with white men, gives us the following account:—

"It is a universally acknowledged fact, that intercourse with Europeans has a decided tendency rapidly to decrease the number of the individuals composing the several tribes; so much so, that in all probability those who reside in the neighbourhood of the metropolis and other large towns, will, in a few years, be utterly extinct.

"They have dreadfully degenerated both in their moral and physical condition, wherever they have had the misfortune to come in contact with the whites. In their natural state, I believe them to be scrupulously chaste, honest, and temperate. In their native wilds they have happily no temptation either to drunkenness or theft: these are vices which have been introduced among them by their civilized brethren the Europeans. They have no incentive to industry. Their wants are so few, and nature is so bountiful, that with the exception of fishing and hunting, they live without labour. They have no idea of agriculture or the arts. Their disposition naturally is decidedly peaceful, they have seldom or ever been known to act the part of aggressors, but are, of course, like all other savages, extremely vindictive when sensible of a wrong. I have conversed frequently with the blacks in Sydney, and also with those in the interior, who have lived almost entirely in their natural state. I have uniformly found the latter superior in form, physical strength, and intelligence. The countenance of the New Hollander is remarkable for possessing a fine intellectual forehead, prominent brow, and very quick, expressive eye."

Such is the character of the Aborigines of New Holland, as it appeared to a dispassionate observer, who dwelt among them. But I will proceed to give you a few extracts from the papers of a young man, who resided for a long time in the interior of the colony of New South Wales, and was once compelled to take charge of a body of convicts. These extracts will give you an opportunity of comparing the character of the convicts with that of the natives, and will, it is hoped, excite the sympathy of your readers, in behalf of the uncivilized men who are forced into an association with our wretched countrymen:—

"I have now under my charge a few of the polished convicts, who have, as they technically term it, served their *lagging*, and have come out of their bondage surcharged with all that can pollute the ears and eyes of men. I have had an opportunity of seeing something of men, but never till I came here did I think that any of my fellow-creatures could be so utterly depraved. The holy Trinity is blasphemed in the most horrid manner, and oaths are used in common conversation. A man who can serve seven years among them and not be polluted, must be almost more than mortal. This place is only fit for those whose conduct has rendered them unfit for society at home. The baneful effect of the example of these men is seen in the poor untutored blacks, who, in perfect innocence, imitate their language; in fact, it is so prevalent, that these poor

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fellows consider it as our common form of speech.

"To give you some idea of the character of these men, I may mention, that one night on our passage to ———, we sat down to refresh ourselves, and made a good fire and a damper. A damper is formed of flour and water only, into a cake about an inch or two thick, and baked by clearing the ashes away, and putting it on the hot earth, and raking the hot ashes over it. Dirty as this may appear, it is "*budjeree patter*," that is, good eating. When the men had refreshed themselves, they began to talk of old times, and of the companions they had when they first came into this country; and of these, who, having rendered themselves of some notoriety, had been convicted and executed in the colony. I know not for what crimes they were sent out, but some parts of their conversation led me to believe that two or three of them had been connected with men executed for murder. Some of them openly declared, during the evening, that there would be certain death to some parties whom they knew, if they should ever meet them. I have no doubt that they would as soon commit murder as eat their dinners, so awfully are they depraved."

In another part of the papers, written by the same person, we have an account of the Aborigines, which is, in some respects, a fine contrast to the character of the convicts:—

"I was told when I left Sydney, that I must be very harsh to the natives, do as others did, call them black thieves, and drive them out of my hut; but I could not do so. They were perfectly honest, and I gave them some refreshment, after which they quietly returned to their gunyahs. I have had the satisfaction of seeing the result of my treatment in a very pleasing way. They go when I tell them, and fetch swans' eggs, opossum skins, or whatever they know I want, and for which I give them small pieces of tobacco. By adopting this system, I have no trouble with them.

"I will give you one proof of their honesty. One morning, a native asked my servant for a smoke, when I appeared to be asleep. The servant offered him my pipe, which had some tobacco in it, but he refused, saying, 'Bail me takee, dat belongs to Mr. ——.' I have frequently left small pieces of tobacco, or ends of cigars about, which they have picked up and brought to me, or put them on my bed, not attempting to take them till they had permission.

"The camp or place where these people live, is nothing more than a few sticks put into the ground in a sloping direction, and covered with the leaves and bark of the tea-tree. They generally build them with their backs to windward; and as soon as the wind shifts, the women knock them down and run them up again in the opposite direction. A hut is made in five minutes. It was one of these that the blacks rigged over me, as I slept in the bush one rainy night. They are very indolent, and never lay up any thing in store, only going out when hunger compels them. I have got them into the way of obtaining skins, &c., by promising them a little reward."

In another letter, the same writer says:—

"Some more blacks have just come up from ——, and have encamped near my door. I am heartily glad to see them, as they make me more lively. They brought me a mess of fish, and two snake skins, one of them has made me a spear, and another is fetching my fire-wood; a third is singing a native song, in a style that would, I think, astonish the musicians at home."

The facts I have related are well calculated to excite the sympathy of Christians. We know that every vice and immorality may, and must be traced to the unregenerated state of the mind and its affections; but the extreme depravity of heart, so awfully displayed by the convict population, and communicated by them to the native tribes, seems to be encouraged in no small degree by drunkenness.

The writer from whom we last quoted says in another letter:—

"Sending the rum has any thing but pleased me; the men have been drunk ever since. Two instances of intemperance have just come under my notice. One man fell overboard, and though not drowned, is very bad; after much pains and attention he revived. Another man has just gone into the bush, with a two gallon keg of rum, and twenty-one blacks with him. His life is not safe. The blacks are getting spirits from the men, but not from me. The quiet of —— has been woefully disturbed by the kegs of rum. The blacks will soon have a thirst for drink, and the harmless

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native will become a terror, where he was before a comfort, to such as myself. One fellow came to my hut, and was followed by a sailor, in the middle of the night, with my fowling-piece, which I am now obliged to keep constantly loaded. Thus Britons disgrace their name and country, and ruin the peace of these harmless creatures, whom I have seen in the first instance refuse spirits when offered."

The writer whom we first quoted, gives his sanction to this view of the origin of European diseases and vices among the Aborigines:—

"No measures have been brought into operation for the assistance or protection of the Aborigines, nor have any rational means been devised, that I am aware of. Temperance Societies may be very well in theory, but they are, in New Holland, utterly powerless in practice. Let government positively interdict the importation or distillation of ardent spirits. Let the simple sale of such a poison be treated as a felony. You will then get rid of the very mainspring of every evil with which the convict is surrounded. Then, and not till then, you will stand some chance of reforming the colonist and convict population, and of benefiting the poor savage."

Considering these remarks altogether distinct from the theoretical opinions of the author, it is evident that the immoderate use of spirituous liquids is one great cause by which the convict and native populations are demoralized. Some means should therefore be adopted, by which they may be freed from temptation; but neither this nor any method of improving their temporal condition can be effective in planting or cultivating Christian feelings, and in reforming the heart. It is by the diffusion of the gospel, that we may hope to produce a salutary change in the springs of human action.

Wm. M. H.

THE INTERNAL COMMUNICATIONS OF GREAT BRITAIN.

ROADS.—No. I

It is our object to give, in as limited a compass as possible, an account of the internal communications of this kingdom, from the time when travelling was both difficult and dangerous; when, from the want of highways, the traveller in moving across the country had to "wend his way as he best could," in a zigzag, backward and forward course, till he found himself at his destination, not much, if any, better than traversing the sandy deserts of Arabia, and equally beset by dangers from marauding robbers; to the present day, when the contrast is perhaps at its greatest. Now, instead of being in a state of uncertainty, within many hours, as to the time of his arrival at his journey's end, the traveller no longer fears, in the language of an old writer, "to be laid fast in the foul ways, and forced to wade up to the knees in mire; and afterwards to sit in the cold, till teams of horses can be sent to pull the coach out;" but is morally certain to accomplish his journey in a small fraction of that time which was formerly required.

In a state of society so artificial as our own, the fact that every increase of knowledge and adaptation of scientific discovery to the wants and exigencies of human life, tend to lessen the labour and to increase the comfort of man, is a source of consolation and encouragement to him who directs his attention to the amelioration of mankind. That knowledge is power, has long been a favourite and prevailing maxim, as well in mechanical as in moral philosophy. As to the latter, we have seen it realized in the rise and preservation of numerous infantine states, which it has cradled into greatness. As to the former, we read it in those mighty operations which make the winds and the waves obedient. The master mind whose genius called into operation that mighty power, perhaps did not, in revolving all its varied and wonderful properties of scientific application, contemplate it in its highest result of all, the possibility, namely, of its conversion to economic purposes, sufficient to uphold the prosperity of the British empire.

In a great commercial country like ours, extending its ramifications to every branch of natural and artificial produce, it is almost superfluous to remark that a vast capital is sunk annually in the mere transport of marketable commodities; which is not only a loss to the seller, as being an unproductive outlay, but entails a heavy increase of expense on the buyer also, upon every article of daily consumption.

It may be a matter of surprise, and almost of unbelief, that with all the

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advantages resulting from excellent roads, canals, and, in many cases, railway conveyance, with which we are surrounded, that we should still find persons who would prefer the mode of transport which our forefathers were obliged to use, namely, by pack-horses, and maintain that the country has never been in so flourishing a condition as when this was the case. Such, however, is the force of prejudice in uninformed minds, that the writer has frequently been told that this is the case, by those whose roads he has been surveying for the purpose of improvement.

The Romans, it is probable, were the first who made any regular roads in Great Britain. For the purpose of facilitating the subjection of the inhabitants, and to secure a communication at all times between their armies occupying different quarters of the island, they formed what are now termed "military roads," which consisted of paths stretched across the country, from one place to another, and paved with large stones. These were generally of very considerable length, and made to pursue a straight line from station to station; thus affording a hard, durable, and safe road, very greatly superior to the swampy, soft, and marshy paths, indiscriminately formed in all parts of the country by its early inhabitants. A grand trunk, as it may be called, passed from the south to the north of England, and another to the west, with branches in almost every direction that general convenience and expedition could require. One road called Watling-street led from Richborough, in Kent, north-east, through London to Chester. The Ermine-street passed from London to Lincoln, thence to Carlisle, and into Scotland. The Foss-way is supposed to have led from Bath and the western regions, north-east, till it joined the Ermine-street. The last celebrated road was Ikneld, supposed to have extended from near Norwich, southward, into Dorsetshire. Some portions of these roads are yet in existence in various places; and, as may be expected, considering the purposes for which they were intended, they are very uneven and undulating. Their direction was from one station to another. These stations were generally placed upon the most elevated parts of the country, for the purpose of watching the motions of the enemy, and these roads invariably avoid the more level parts of the country, and stretch from hill to hill.

For many centuries after the invasion of the island by the Romans, articles of trade were transported from one place to another upon the backs of horses, which were called "pack-horses." Even so late as the middle of the last century, almost the whole land carriage of Scotland, and of several parts of England, was effected on the backs of horses; and we find, at the present day, in most of the mountainous parts of Wales, and in the Highlands of Scotland, the whole traffic carried on by the same mode of carriage.

The paved and hard roads of the Romans would afford a comparatively good track for horses; but as the inhabitants advanced in civilization, and commerce required the transportation of bulky articles, this mode of conveyance would be inconvenient and inapplicable to the purpose. It is probable the next change of interior communication would be the introduction of sledges, by which the articles to be conveyed were placed upon a frame of wood, which was dragged along by the horse; and when the goods were very bulky, the united effort of several horses could be then employed, which could not be done when it was laid upon their backs.

It is very uncertain at what period wheel carriages were first introduced into Great Britain. The war chariots of the ancient Britons, (described at page 26 of the "Visitor," for 1836,) formed a species of wheel carriages; but it does not appear that at that period they were used for the purpose of conveying goods.

By degrees, however, when civilization reached a higher degree of perfection, and commerce became more extended, the demand for articles of trade or comfort in the interior districts of the country, would enforce the adoption of some mode of communication suitable to the advanced state of the arts and manufactures. The use of wheel carriages, where the weight that could be conveyed by a horse would be considerably greater than either what he could drag upon a sledge or carry on his back, would proportionably extend the facility of internal traffic.

To the public of the present day, who witness and derive the advantages of the

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present admirably paved state of the streets of the metropolis, the following statement relative to the Strand, Charing-cross, and Parliament-street, must appear strange:—

"In 1353, the road from London to Westminster had become so dangerous for the transit of passengers, or carriage of goods, as to demand the interference of government. A mandate was therefore directed, in the name of the king and council, dated Westminster, Nov. 20, to John de Bedeford, of London, appointing him the commissioner for the paving of the road in question. This instrument recites, that the highway leading from the gate called Temple-bar, London, to the door of Westminster-abbey, by the frequent passage of carts, horses, merchandise, and provisions, to the Staple at Westminster, ever since its establishment, had become so deep and muddy, and the pavement so much injured and broken, that unless soon repaired, great perils must be incurred by the passage both of men and of carriages. In order to remedy this evil, therefore, it was ordained that the foot-pavement adjoining to the houses on the line of the road, should be newly laid at the expense of the owners of the nearest houses; and that money should be levied by tolls on goods sold at the Staple, to defray the charge of paving the road between the kennels on each side."

The first general attempt to put the roads of this country into order occurred when the turnpike system was introduced. The ancient method employed to mend roads in England, until after the restoration of King Charles II., was by a pound rate in the respective counties on the land-holders, and by the supplying of carts and horses of parishes for a limited number of days. But when, after the last-named period, commerce was become generally increased, and in consequence thereof wheel carriages and pack-horses were extremely multiplied, the first turnpike-road was established by law, in 1653, for taking toll of all but foot-passengers on the northern road through Hertfordshire, Cambridgeshire, and Huntingdonshire; which road was then become very bad, by means of the great loads of barley, malt, etc., brought weekly to Ware in wagons and carts, and from thence conveyed by water to London.

It was not, however, till after the peace of 1748, that any thing like a great exertion was made to redeem the public highways from the wretched state in which they had always been.

The following description of the roads is taken from Mr. M'Culloch's Dictionary of Commerce:—

It is not easy for those accustomed to travel along the smooth and level roads, by which every part of the country is now intersected, to form an accurate idea of the difficulties the traveller had to encounter a century ago.

Roads were then scarcely formed, and in summer not unfrequently consisted of the bottoms of rivulets. Down to the middle of the last century, most of the goods conveyed from place to place in Scotland, at least where the distances were not very great, were carried, not by carts or wagons, but on horse-back. Oatmeal, coals, turf, and even straw and hay, were conveyed in this way. At this period, and for long previous, there were a set of single horse traffickers that regularly plied between different places, supplying the inhabitants with such articles as were there most in demand, as salt, fish, poultry, eggs, earthenware, &c.; these were usually conveyed in sacks or baskets, suspended one on each side the horse. But in carrying goods between distant places, it was necessary to employ a cart, as all that a horse could carry on his back was not sufficient to defray the cost of a long journey.

The time that the carriers (for such was the name given to those that used carts) usually required to perform their journeys seems now almost incredible. The common carrier from Selkirk to Edinburgh, thirty-eight miles distant, required a fortnight for his journey between the two places, going and returning! The road was originally among the most perilous in the whole country; a considerable extent of it lay in the bottom of that district called the Gala Water, from the name of the principal stream, the channel of the water being, when not flooded, the track chosen as the most level and easiest to travel in. Even between the largest cities the means of travelling were but little superior. In 1678, an agreement was made to run a coach between Edinburgh and Glasgow, a distance of forty-one miles, which was to be drawn by six horses, and to perform the journey from Edinburgh

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to Glasgow and back again in six days. Even so late as the middle of the last century, it took a day and a half for the stage coach to travel from Edinburgh to Glasgow, a journey which is now accomplished in four and a half or five hours.

In 1706, the conveyance from London to York was by a stage coach, which was advertised as follows, to perform "the whole journey in four days," which is now accomplished in twenty-four hours. "Every Monday, Wednesday, and Friday, (if God permit,) it sets forth at five in the morning; and returns from York to Stamford in two days, and from Stamford by Huntingdon to London in two days more, and the like stages on their return."

In 1712 there appeared the following advertisement in the *Newcastle Courant*:—

"Edinburgh, Berwick, Newcastle, Durham, York, and London stage coach, begins on Monday, the 13th of October, 1712. All that desire to pass from Edinburgh to London, or from London to Edinburgh, or any place on that road, let them repair to Mr. John Baillie's, at the Coach and Horses, at the head of Canongate, Edinburgh, every other Saturday; or to the Black Swan, in Holborn, London, every other Monday; at both which places they may be received into a stage coach, which performs the whole journey in thirteen days, without any stoppage, (if God permit,) having eighty able horses to perform the whole stage. Each passenger paying four pounds ten shillings for the whole journey, allowing each passenger twenty pounds weight, and all above to pay sixpence a pound. The coach sets out at six o'clock in the morning. Performed by Henry Harrison, Robert Yorke, Richard Speight, Richard Croft."

In 1760, the journey to Brighton, a distance then of about sixty miles, was performed as follows:—The travellers, after breakfasting, dining, and supping on the road, were, by great exertion, able to get as far as East Grinstead, (about thirty miles,) where they stayed all night; and by persevering in the same manner the following day, were enabled to reach London at night, making the extraordinary journey of sixty miles in two days. These were the "good old times." Things are now strangely altered, and we are extravagant enough to perform the same journey, now reduced to fifty-two miles, in five hours, and sometimes less. And when the rail-road, which has received the sanction of the legislature, is completed, the distance will be performed in two hours. What a contrast, within the space of eighty years, to accomplish with ease in two hours what then occupied with difficulty as many days!

Mr. Arthur Young, in his "Six Months Tour," published in 1770, gives the following account of some of the roads in the north of England:—"To Wigan. Turnpike.—I know not in the whole range of language terms sufficiently expressive to describe this road. Let me most seriously caution all travellers who may accidentally propose to travel this terrible country to avoid it, for a thousand to one they break their necks or their limbs, by overthrows or breakings down. They will here meet with ruts, which I actually measured, four feet deep, and floating with mud, only from a wet summer; what, therefore, must it be after a winter? The only mending it receives is tumbling in some loose stones, which serve no other purpose than jolting a carriage in the most intolerable manner. These are not merely opinions, but facts; for I actually passed three carts, broken down, in these eighteen miles of execrable memory. To Newcastle. Turnpike.—A more dreadful road cannot be imagined. I was obliged to hire two men at one place to support my chaise from overturning. Let me persuade all travellers to avoid this terrible country, which must either dislocate their bones, or bury them in muddy sand."

It might be easy to multiply quotations in proof of the state of travelling in this country so lately as eighty years ago; but enough has been said upon the subject. After 1760, the improvements of the roads, and hence of the general means of travelling, partook of the spirit of improvement which sprang up about that time, and which has gone on so rapidly, that to us the state of these things, in the days of our grandfathers, appears very astonishing, nay, almost incredible.

Now that Britain is the workshop of the world, and radiates the produce of her busy population through her every corner, and into distant lands, good communication is so necessary, that we can scarcely imagine ourselves bereft of it. The large capital sunk in mere trans-

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port, taken from the means of the agricultural, manufacturing, and commercial body, is deeply felt by them, and consequently must be paid for in the price of every article of daily necessity. Any means, therefore, which will improve and accelerate conveyance, will be undoubtedly a great gain to every individual throughout the community.

How has the expedition of steam-boat conveyance increased the productive industry and prosperity of the land. It has brought the Scotch farmers' cattle, fat and fresh, to the London butcher. It has brought the cotton manufacturer of Dundee as near to London as the manufacturer at Manchester is. The northern producer and southern consumer are closer together. Our notions of space, despatch, and distance, have been completely altered. Instead of measuring by miles, we compute by hours. Dublin is, by the opening of the Liverpool and Birmingham rail-road, brought within thirty hours of London, instead of being sixteen days distant; but we cannot enumerate the various radiating lines where London is the centre. These lines have all been shortened at least one-half, and the energies of the kingdom are thus more compacted and concentrated.

THE GOSPEL A SAVOUR OF LIFE OR DEATH.

By the mission of the Spirit in such abundance after Christ's sitting at the right hand of God, we should learn with what affections to receive the gospel of salvation, for the teaching whereof this Holy Spirit was shed abroad abundantly on the ambassadors of Christ; and with what heavenly conversations to express the power which our hearts have felt therein, to walk as children of the light, and as becometh the gospel of Christ, to adorn our high profession, and not to receive the grace of God in vain. Consider that the word thus quickened will have an operation, either to convince unto righteousness, or to seal unto condemnation; as the sun, either to melt or to harden; as the rain, either to ripen corn or weeds; as the sceptre of a king, either to rule subjects, or to subdue enemies; as the fire of a goldsmith, either to purge gold, or to devour dross; as the waters of the sanctuary, either to heal places, or to turn them into saltpits, Ezek. xlvii. 11. According to the proportion of the Spirit of Christ in his word revealed, shall be the proportion of their judgment who despise it. The contempt of a great salvation and a glorious ministry, shall bring a sorer condemnation, Heb. ii. 2, 4. "If I had not come and spoken unto them," saith our Saviour, "they had not had sin," John xv. 22. Sins against the light of nature are no sins in comparison of those against the gospel. "The earth which drinketh in the rain that falls often on it, and yet beareth nothing but thorns and briars, is rejected, and nigh unto cursing," Heb. vi. 7, 8. Even here God will not always suffer his Spirit to strive with flesh; there is a day of peace, which he calleth our day, a day wherein he entreateth and beseecheth us to be reconciled; but if we therein judge ourselves unworthy of eternal life, and go on obstinately till there be no remedy, he can easily draw in his Spirit, and give us over to the infatuation of our own hearts.—*Reynolds.*

THE FOLLY AND ABSURDITY OF ATHEISM.

To deny the being of a God is not only impious but irrational: it is to deny and to contradict true reason. The psalmist calls that man a fool who says in his heart, "There is no God," Psa. xiv. 1. If idolaters are charged with brutishness that worship false gods, Jer. x. 14, 18, how much more the atheist who denies a God? And if the apostle saith of them, that "their foolish hearts were darkened," when they degraded Him with their vain rites and modes of worship, how much more are such darkened with folly, that deny his being and existence?

Though hell be the seat of perfect wickedness, yet this speculative atheism is not to be found there. The devils themselves believe and tremble. What a monstrous thing, then, is it, that it should be found upon earth! And especially in that part of the earth where men have not only the book of nature, but the written word of the God of nature as a comment upon the works of it! How monstrous for men to think it a display of wit to be able to dispute against a Deity, and a piece of gallantry, to live above the fear of their Maker.—*M. Barker.*

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ROSE AND CROWN LANE;

OR,

A SKETCH OF MY NEIGHBOURHOOD.—No. II.

I CONTINUE my account of the inhabitants of this lane:—

No. 2, is the residence of Mr. Brown, the plasterer, an industrious, quiet, inoffensive man, and his wife one of the most notable housewives in the row. Brown goes out to his work by six o'clock in the morning, or sometimes an hour earlier; and about the same time, his wife throws open the bed-room window and sweeps her house, every part of which, and every article of furniture is kept in the nicest order. Sometimes she is seen, working in her garden an hour before breakfast, as the management of that department chiefly devolves upon her, her husband being fully employed abroad. One of her first employments is to fetch a bucket or two of water from the pump, which is common to all the row. I believe no one visits that pump more frequently than Mrs. Brown. She very justly esteems pure water one of the greatest blessings of life; with her it is in such constant requisition, that I should think that for every pint of water that goes into Perkins's house, at least a pailful is used in hers. Her children, in their cleanly, healthy appearance, manifest the good effects of the liberal use of that purifying element, both in their persons and their garments. Long before the next door neighbours are stirring, they are all nicely washed and dressed, eating their mess of bread and milk, with a sharp injunction, every now and then, to mind that they do not spill it on their pinafores. When their father comes home from work at breakfast time, he finds all set out in the neatest manner. Nor dare the children presume to touch an article without permission, or take another seat than that which is allotted them by their mother.

It is a pleasure to see the handy manner in which she sets about her work, and the numberless contrivances she has for preserving her clothes and her furniture from injury. I have always observed much of character in the dress and personal appearance of females when busily engaged in their domestic affairs. Some I have seen, with thin, slight, showy dresses, such as would easily soil and injure, and, perhaps, would not bear washing. These I have generally found to be vain, extravagant, and thoughtless, as if they were loth to wear a worse thing, when they had a better belonging to them, however unsuitable it might be to the business in hand. Others, who appear dirty and slatternly, with their hair loose, or curl-papers hanging about their faces, with a dirty cap, or loose gown, may be fairly set down as slatterns throughout, who have no respect for their families or themselves. A decent woman, if she were certain of being seen by no one else, could not bear that her husband and children should see her in this trim, or even bear to feel conscious of it herself. There are others who at a glance show the tidy, careful housewife; the character is seen in the materials and make of their garments, the stuff or dark printed gown, the checked or woollen apron, the stout shoes, and black worsted stockings, the clean, close-fitting cap; the sleeves short or turned back, and preserved by a cuff drawn over. Then there are the tidy little contrivances of a bit of mat, on which to kneel when cleaning the grate; a board on which to set a dirty saucepan; a mat or tray, on which to place a jug or full dish, or whatever may grease or spoil a table. All these, and many similar symptoms of neatness and care Mrs. Brown constantly exhibits. It seems to be her rule, in using the things about her house, never to employ a better thing when a worse will answer the purpose; and by this means, both her wardrobe and her furniture are constantly kept in good condition. The litter of every meal is immediately and thoroughly cleared away, and every thing put in its proper place. Indeed, from the constantly neat appearance of her cottage, the order of her shelves, and the brightness of her tins and coppers, a stranger might conclude that the things were never taken down. Mrs. Brown is also an excellent manager in forecasting her work. Whatever she intends to provide for dinner, her plan is laid beforehand, and her fire made up accordingly. She would think it a shame to have occasion to use wood after once lighting the fire, or to use the bellows at all, or to put on a bit of fresh coal, if cinders would answer the purpose. Her up-stairs rooms, after being thoroughly aired, by the beds being stripped, and the windows left wide open, are set in order, and nicely dusted every day. When a neighbour has expressed surprise that she should take so

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much trouble every day, her answer always is, "I used to do it for others when I was at service, and why should I not do it for myself now? I like cleanliness as well as gentlefolks, and I have as good a right to it as they, and the better chance of having it, for I look to myself for it, while they look to their servants."

Mrs. Brown is very punctual in sending her children to school, and without a tear or a soil on their clothes; she is also a good mother to them, in training them to habits of industry and cleanliness, like her own. Her girls can clean a grate, dust a room, or polish a table, or wash up tea-things, as well as herself. Her boys chop up the wood, break the coals, and sweep the back-house and yard; both boys and girls knit their own stockings, and are accustomed to put in its place every thing they make use of. If their behaviour equals their cleanliness, these children will make good servants and apprentices. The business of washing is not deferred till Saturday evening, which Mrs. Brown justly considers a most beggarly practice. She takes a morning in the fore part of the week, has her little copper filled over night, from a small rain-water tub; and with plenty of water, good rubbing, and good rinsing, she makes her linen look as white as the drifted snow. In general, her clothes are hung out to dry about the time that Perkins's family come down stairs. In the course of the day it is all nicely ironed, aired, mended, and put in the chest, ready for use: by this plan it may be easily supposed, that the clothes not only look much better, but wear three times as long; and hence it is that she can afford to keep a much better stock, which is one of the things that Mrs. Brown considers is decent and respectable.

Another branch of Mrs. Brown's household economy is, that of making a little home-brewed beer, which she justly calculates to be much more wholesome, and much less expensive than getting it from a public-house, as well as that it keeps her husband and children out of the way of temptation. She is very careful of it, never allowing her husband to exceed half a pint, and grudging sorely if he happens to bring in a friend to take half a pint with him. But I find I am letting out Mrs. Brown's weak point, and I have not yet done with her excellences. She is an excellent manager in money matters, and her husband being a sober, steady man, regularly brings home his earnings. Now, Mrs. Brown from the first resolved to be a week beforehand. I have heard her say how she managed it, but I do not exactly recollect. I believe it was by living very close several weeks, and sparing from each sixpence or a shilling, until, on the Saturday evening, she could pay all her weekly expenses, without touching the money her husband had just brought home. Having once accomplished this, she has always had a strong stimulus to keep up to it, and as the saying is, she found it harder to lay by the first five shillings than the next five pounds. In every thing she acts by a plan, and she has got the way of making a penny go as far as it possibly can. She cannot bear the thought of feasting one day, and starving another; to prevent this, she allots so much for each day's expenses in every particular, reserving a portion, also, for such expenses as do not occur weekly. At the proper time of the year, she contrives to get in a stock of fuel. She buys her soap seven pounds at a time, by which some pence are saved in the purchase, and much more in the consumption; for, being thoroughly hardened before using, three pounds go as far as four fresh bought. She bakes her own bread, which she finds more wholesome and satisfying than bought bread, and though nominally not much cheaper, yet in reality a saving, as it goes much further; hence, among her contrivances, she has to provide for the purchase of a sack of wheat or flour. She so orders her day of baking, as to have enough bread in the house to serve her family through the next two days, for she considers it a shameful waste to cut new bread. This makes a difference in the consumption of one loaf in five. As the tenants are not allowed to keep pigs, at the time of pig-killing Mrs. Brown contrives to buy one ready-fatted. For this purpose, she has made a weekly reserve of a shilling or more, "but then," as she observes, "it is money well bestowed." She sells the spareribs and griskins, which bring in nearly a pound; the rest, of what is called the offal, by good management, keeps the family in meat for a fortnight; and the sides when cured, yield a dinner of bacon at least once a week, for the rest of the year. The very sight of a flitch of bacon on a cottage rack, excludes the idea of

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wretched poverty. In Mrs. Brown's calculations a weekly provision is made for the rent, which is a certain expense; and a trifle is laid by in case of sickness, or lying-in, or any others which may be deemed uncertain expenses.

Mrs. Brown is not one of those who feed their families on bread and cheese, or bread and butter, because they think they cannot afford a bit of meat. She considers it the worst of management to feed a set of hungry children on bread and cheese, which she knows they will eat till their jaws ache, and till they are hungry again. So she generally contrives to have a bit of meat of some sort every day; or, perhaps, a large suet pudding, which if thoroughly well-boiled, is both wholesome and nourishing. As she goes with the ready money in her hand, she can always have her pick of the market, and she generally buys such joints as do not bear the highest prices, but yet, by good management, answer well in a family. She does not send a little bit of meat to be scorched up at the baker's, and robbed of the dripping; but cooks it so as to turn fat, and lean, and bones, to the best account. I have often seen her bring home a breast of mutton, a shin of beef, or a couple of sheep's heads; and the savoury smell which issued from her cottage that dinner time, and the next, and perhaps a third, convinced me that she had turned her marketing to the best account.

Mrs. Brown is not the most neighbourly woman in the world, and perhaps would hardly like to tell me her particular modes of preparing these dishes; for she rather prides herself upon doing things better than her neighbours, and makes a great secret of her method of doing them. I do not agree with her in this particular; and, having paid some attention to these things myself, I may perhaps, at some future time, give a few hints on these matters, and will only say here, that I firmly believe there is less money spent on the substantial family meal of Mrs. Brown, than in the uncomfortable, unsatisfying pittance of Mrs. Perkins. It may be supposed that with the care of her house and family, Mrs. Brown has quite as much business as she can attend to; but it is surprising, how, by industry and good management, people may eke out a little, and a little more. No children are more thoroughly attended to than the little Browns; but then they are kept in order, and managed with half the trouble with which those parents who are indolent and irregular are annoyed. When Mrs. Brown has a baby, she accustoms it to lie on the bed, or on a bit of carpet, one of the elder children amusing it, while she is cleaning her house, or attending to some other matters. Then, between whiles, she takes it up and gives it a good dancing, that it may not become discontented. At meal times, too, and when dusk comes on, she always nurses it herself, to secure to it plenty of exercise, and at the same time to get as much time as she can, without neglecting it for other employments. She always puts her children to bed early and regularly, and thus secures a quiet evening for needlework. By wearing clothes carefully, and mending every tear and thin place as soon as it appears, not half the time is required for mending that would be necessary, if things were suffered to run in great holes. Besides this, she soon teaches the children to mend their own clothes, and do other little useful matters; and one way or another, she contrives most weeks to earn a shilling or two, by working for the shops. She has often been pressed to go to washing or ironing in gentlemen's families; but though she would earn more money by it, she thinks it would not answer so well in the longrun; and, for my part, I think she is about right. Her children would be neglected, and perhaps get into accidents or bad habits, or, at any rate, would wear and tear their clothes more than when under her immediate care. For a mother with a young family, one shilling earned at home is worth two earned abroad. Be it little or much that Mrs. Brown earns in this way, she devotes it either to the purchase of some useful article, by which comfort is promoted or saving effected; or else she deposits it in the savings' bank, which she frequently visits, and if report be correct, has laid up a snug little portion. It is from her shop earnings that she has furnished herself with a rain-water tub, a copper, and an ironing stove. Those who do not possess these conveniences, can hardly imagine the saving of labour and expense effected by them, or they would certainly try, like Mrs. Brown, to earn or save an extra weekly shilling, in order to obtain them.

After mentioning so much that is excellent and praiseworthy in the conduct and habits of my neighbour, I am sorry that

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there should be any thing to call for a word of censure. But truth is truth, and I should go far away from it, if I were to describe her as a faultless woman. She is naturally of a harsh and violent temper; and I am afraid she has little idea of the Christian duty of restraining and subduing the temper; hence, though she does so much to make her home comfortable, her industry and economy are not as effectual as they might be in promoting the comfort of her husband and children. She makes her children submit to her authority; this is very proper; but then they obey her more from fear than love. She does not take pains to convince them of the reasonableness of what she requires; and she does not make allowance for the little faults and errors of childhood, but flies into a violent passion, and beats them severely for a trifling offence. Cleanliness, order, and frugality, are very good things, but they are not every thing; and I am afraid Mrs. Brown errs in making them the end instead of the means. She seeks her happiness in earning and saving money, and making her house clean and tidy; and then she almost grudges the use of the things she has obtained, and makes an idol of her cleanliness, instead of making it subservient to the comfort of her husband and family.

When I hear her violently smacking the children for splashing their frocks, or coming in doors without wiping their shoes, I am afraid that she is destroying in them the sense of moral rectitude. What more could she do, if they had been guilty of theft or falsehood? And though it is very right to inculcate on them lessons of cleanliness and care, it is wrong to confound moral distinctions. Besides, I am afraid lest it should harden their little hearts against her, and that, instead of feeling towards her the affection and gratitude to which, on some accounts, she is so well entitled, they should look upon her with aversion, as a tyrant. It is not unlikely, too, that instead of copying her example in cleanliness and care, they may, by her over-strictness and particularity, be driven to the other extreme, and take no thought or care at all. Then, when her husband comes in tired from work, and wants to take his meal in quietness, it must be very irksome to be snapped at, and thwarted in every little thing; and if he brings in a friend, to be grudged any little hospitality, as if it was robbing her and her children. This is both unkind and injudicious; it is what has driven many a man to the public-house to spend his earnings, and seek his enjoyments, out of hearing of a scolding wife. To be sure, the conduct of the husband in such a case is as mistaken and wrong as that of the wife, and I am very glad that neighbour Brown does not seem inclined to take to such courses; but the best way to avoid evil is to avoid the occasion of evil. I wish Mrs. Brown would think of this, and endeavour to make home as comfortable, by her good temper, cheerfulness, and forbearance, as she does by her industry and cleanliness.

I must remark, also, that I am sorry to observe Mrs. Brown employing her Sunday mornings at work in her garden: to be sure the garden is a pattern of neatness, and I do not wonder at her feeling a little proud of it; but I am sure it would be for her comfort, as well as it is her duty, to spend that day in a different manner. I do not say she could always go to church when she has a young child, but at least she might take turns with her husband and eldest girl; and, if she must be at home, she might improve the time in a manner more suitable to the day. Indeed, if I am not very greatly mistaken, the neglect of religion is at the root of all her other errors and failings. If she were but brought to pay due attention to her Bible, and to seek the instructions of a faithful minister of Christ, she would be taught to discharge her duty, not in one particular only, but in every respect; her good qualities would be improved and regulated, and her bad ones corrected; she would be taught not only to keep her children in subjection to her will, but to "train them up in the nurture and admonition of the Lord," and that she must not "provoke them to wrath, lest they should be discouraged." She would learn that cleanliness, though it is said to be next to godliness, is no substitute for it; but that "godliness with contentment is great gain." While proving that "the hand of the diligent maketh rich," she would not forget that to the blessing of God she is indebted for the success of her own diligence. While suitably concerned to provide for the wants of her family, and to lay up in provident reserve for a rainy day, she would not forget that

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"one thing is needful," namely, true religion; and she would be chiefly concerned that herself, and those connected with her, should have a treasure laid up in heaven that cannot waste away.

One thing more I must just hint at: Mrs. Brown is not the most agreeable neighbour; she is very easily offended when no offence was thought of. If a neighbour meets her at the pump, she generally contends for filling her pail first: and on a windy day, if any thing blows off a neighbour's line into her garden, she first tramples it under her feet, and then flings it back with a torrent of abuse, for the injury it has done her garden. She teaches the children to stand up for their rights, and this often leads them to quarrel with neighbours' children, and fosters a spirit of ill-will in their bosoms. I must say, that since Mrs. Brown has lived in the row, I question whether any neighbour has received an act of kindness from her; for my own part, I have been so fortunate as to avoid any quarrel, but it has been by taking the greatest care that not a child, or an animal, or even a branch of a tree, should intrude one inch on her premises: and even the feelings of good-will which, as a neighbour, I sincerely cherish towards her, I never venture to express, lest I should inadvertently give offence when I meant only kindness. But this unaccommodating disposition, like the other unamiable traits in Mrs. Brown's character, may be traced to the same source, a worldly, selfish spirit; and would be effectually cured by the same remedy, the softening influence of the grace of Christ, which would induce neighbours to "endeavour, as much as possible, to live peaceably with all men;" to be all of one mind, having compassion one of another, to love as brethren, to be pitiful and courteous, not rendering evil for evil, or railing for railing, but contrariwise, blessing; knowing that we are thereunto called, that we should inherit a blessing. 1 Pet. iii. 8, 9.

No. 3, I have already stated, is occupied by myself. I may therefore be excused from entering into particulars. As far as I know I do my best to promote the comfort of those around me, to provide things honest in the sight of all men, and to live in peace and good-will to my neighbours. There is no doubt great room for improvement, and I shall thankfully receive any hints which may conduce thereto.

VERSIONS OF THE SCRIPTURES.

In asserting that every faithful translation possesses, as a Divine revelation, the same authority that attaches to the original Scriptures, the statement is of course to be understood in a practical point of view. Speculatively, or rather critically considered, there must ever, as it regards authority, be a degree of difference between them; just as there must ever be between the most correct copy of the Hebrew and Greek Scriptures which can now be obtained, and the immaculate autographs of these Scriptures; but for every practical and saving purpose the authority is strictly tantamount. Take, for example, our common English version, the general fidelity and truth of which have always commanded the assent of the most competent judges: what revealed truth, or what essential aspect of revealed truth, does it not teach? Is it not the same eternal, omnipotent, omniscient, benevolent, holy, righteous, and all-perfect God, whose character is there displayed, whose will is there disclosed, and whose rule is there established? Are not the same features of human character and condition there portrayed? Does it not disclose the same blessed Redeemer; the same glorious plan and means of salvation; the same privileges of believers; the same moral precepts; the same positive laws; the same states of future and eternal retribution? What motive is urged in the one, that is not urged in the other? What promise, encouragement, threatening, warning, invitation, or expostulation is contained in the one, which is not equally contained in the other? In point of practical authority, therefore, such versions are perfectly upon a par with the originals. And then as to practical effect: who, that is conversant with the subject, will deny, that fear of God, trust in his mercy, faith in the Mediator, dependance on the Holy Spirit, devotedness of heart, and holiness of life, have been produced by the Divine blessing on the simple perusal of the English Scriptures, equally as in those cases in which the Hebrew or Greek texts have been the instrumentality employed? Rather, we may say, how limited are the effects resulting to scholars, compared with those which result to the unlearned! Where there is one Junius, whose mind has been savingly affected by the reading of the original, there are thousands and hundreds of thousands to whom the Divine

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word, contained in their vernacular versions, has proved the power of God unto salvation.

Contemplating the subject, then, in this light, in which alone it must be viewed, in connexion with the grand design of revelation, are we not fully authorised to advance a claim to inspiration in favour of the versions in question? Do they not contain a transfusion of the original inspiration, in so far as the truths which they exhibit are concerned? And is it not this transfusion, as identified with these truths, that stamps the versions with an authority which never can attach to any work of mere human origin or composition? Possessing this authority, we scruple not to assign to them the paramount and sacred designations, "The oracles of God;" "The words of eternal life."—*Dr. Henderson.*

ON THE DISTINCTION BETWEEN PLANTS AND ANIMALS.

In our last number, having noticed the distinction between organic and inorganic bodies, we shall now proceed to notice the distinction between plants and animals.

The strong impression made upon our own minds, when we survey the organic creation, concurs with the universal feelings of all ages, in the establishment of two great kingdoms, which divide the organic world between them. These are the *animate* and the *inanimate*, or animals and vegetables. Animals have been briefly characterized as living, sentient, and capable of locomotion; vegetables, as living, but neither sentient, nor capable of locomotion. In the main, these characters are applicable; but in order to arrive at more definite and clearer ideas, let us place a vegetable before us on the one hand, and an animal on the other, and analyze their differential features.

The vegetable we see to be fixed in the earth, by a part called its root, while another part is raised into the air, and consists of stem, branches, and leaves. In the disposition of these parts, we look in vain for rigorously symmetrical arrangement; there is, indeed, order, harmony, and a due adjustment of parts: one vegetable is the type of its species, one leaf the type of every leaf on the same plant, and consequently of the leaves of every plant of the same species; but this is all. The elm, for example, has its peculiar leaf, and bark, and adjustment of branches, so that it cannot be mistaken for the oak; but one elm, though a type of every other, does not present the same number of branches or leaves, nor the same proportions between one part and another. Moreover, the vegetable, fixed to the earth by its roots, is incapable of removing to another locality, nor does it possess the power of true voluntary motion. Hence it is incapable of avoiding injuries; but with this incapacity of self-protection, it is insensible of injury; it experiences neither pain nor pleasure. A sentient being, that is, one whose frame is susceptible of pleasure and pain, must be a locomotive being, and its actions will be voluntary. Where we see the powers of locomotion, there we find sensibility to pain and pleasure; where there is no power of locomotion, no voluntary movement, there pleasure and pain are as nothing.

Let us next turn to the animal. We find it composed of parts symmetrically arranged, and constituting a body, and various members. Fixed by no root to one spot, in which to live and perish, it is free; it moves, it feels, it exerts the power of locomotion.

Such are the obvious differences between animals and plants; but if we proceed to a closer investigation of their respective organization, we shall discover yet wider lines of distinction.

In all animals we find an internal apparatus for the reception of food, which there undergoes a certain process termed *digestion*, before any portion is absorbed into the system. From the interior surface of this apparatus arises a multitude of minute tubes, termed by anatomists lacteals, which take up such particles as by this process become fitted for the organic economy, and ultimately convey them into the circulating fluid, where they lose all trace of their former appearance, and become incorporated with the body. Now, the very existence of such an internal laboratory, for the purpose of preparing food previously to its admission into the system, supposes a complication of organs both internal and external: internal, as it regards the accomplishment of the change necessary to be wrought on the matters subjected to their action; external, as it regards the powers of searching for food, and its acquisition when found.

Plants have no common internal cavity for the reception and precursory

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digestion of food: they take it into their system at once, the fine fibres of their roots being analogous to the absorbing tubes, which arise from the internal surface of the digestive organs of animals. The food of plants is already prepared, we were going to say digested, so as to make it ready for their nutriment; it has only to be absorbed, and consists of various fluids and gaseous elements presented by the soil and the atmosphere. Where the seed germinates there will the plant find its nutriment; but if by accident it is denied it, there must it prematurely perish. Here then we see the absence of a digestive apparatus, accompanied by the absence of external organs adapted for the search and acquisition of food. Nature has fixed the plant, and at the same time, has placed its nutriment even in external contact with it; nature has made the animal locomotive, and has consequently given it an internal apparatus for the reception of a supply of matter, whence the system may be duly nourished and sustained till more can be acquired.

When, however, we say that animals are locomotive, we do not forget that there are some, low in the scale of animal organization, which, plant-like, are destitute of this faculty; but in such we find a plant-like simplicity of structure, and a plant-like arrangement of external organs. They are among a class termed *Radiata* by Cuvier, from their organs of motion, for they can move, though many are fixed to one spot, being disposed like rays around a centre, and he observes, "They approach the homogenity of plants, they exhibit no distinct nervous system, nor organs of particular senses; with difficulty can we trace in some of them the vestiges of a circulation; their respiratory organs are almost always on the surface of their body; the greatest number have merely a sack with no aperture, the mouth excepted, for their whole intestinal apparatus; and the lowest families present nothing but a sort of homogeneous pulp, moveable and sensitive." Still there is even in these plant-like beings an internal digestive apparatus; simple, it is true, but still it is internal, and the animal seeks its food; if it cannot quit its local station, it spreads abroad its feelers in search of what chance may throw in its way, of what the teeming waters of the sea may bring; but these matters must be received internally and digested. There is, then, between the polype and the plant a clear, yet narrow line of demarcation. To return to the train of our remarks: we observed that the plant possesses no true sensation, as animals do, and we may further add, that the power of locomotion is necessarily connected with the faculty of sensation. That a being, susceptible of pleasure and of pain, endowed with various senses, and having affections and passions, should statue-like be fixed motionless upon a life-enduring pedestal, would be an outrage upon the harmony and laws of nature. Where these endowments are given, the power is also given of seeking the good and avoiding the evil.

We sum up, then, the leading differences between animals and plants, by observing, that all animals possess an internal cavity for the reception and digestion of food; that, with the exceptions among the *Radiata* referred to, they are endowed with organs of locomotion, symmetrically disposed; that they are endowed with sensation or feeling; that the greater number have additional senses, such as those of sight, of hearing, of taste, and of smell, a condition connected with a high degree of organization and nervous development; and that in such as are thus gifted, there are exhibited various mental powers, and various affections and passions.

We might here go on to detail the chemical differences which have been discovered in the elementary structure of animals and of plants; but what do these differences amount to? Plants, we are told, contain, as it respects their solid parts, carbon, oxygen, and hydrogen, with scarcely a trace of azote, and that silica is sometimes incorporated with their outward covering. The solid parts of animals consist of lime or magnesia, united with carbonic or phosphoric acids; but if we parallel the beings of the animal kingdom, destitute of solid parts, as the *Medusæ*, with mucilaginous vegetables, we shall find that the gum or mucilage of the plant affords no azote, but that azote, on the contrary, enters largely into the composition of the albumen or gelatine of the soft animal. In some plants, however, it is acknowledged "that substances of an animal nature, or abounding in azote, have been detected; not, however, constituting a whole plant, but only

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occurring in certain situations, and always in company with other substances of a decidedly vegetable nature, or consisting only of carbon, hydrogen, and oxygen. But in the soft animals, there is no extensive combination of carbon, oxygen, and hydrogen, into which azote does not enter." Such, then, are the elementary or ultimate principles which make up the compounds of animal organization; these compounds being gelatine, albumen, osmazone, or extractive mucus, sugar, oils, such as spermaceti, fat, blubber, &c., various acids, such as uric, lactu, benzoic, and many others. Of these chemical elements are constituted the solids and fluids of the animal frame.

But what has all this to do with *life?* Nothing. "With all the knowledge," says Professor Berzelius, "we possess of the forms of the body considered as an instrument, and of the mixture and mutual bearings of the rudiments to one another, yet the cause of most of the phenomena within the animal body, lies so deeply hidden from our view, that it certainly never will be found. We call this hidden cause *vital power*, and, like many others who, before us, have in vain directed their attention to this point, we make use of a word to which we can affix no idea. This power to live belongs not to the constituent parts of our bodies, nor does it belong to them as an instrument, neither is it a simple power; but the result of the mutual operation of the instruments on one another, a result which varies as the operations vary, and which often, from small changes or obstructions, ceases altogether. When our elementary books inform us that the vital power in one place produces from the blood the fibres of the muscle, in another a bone, in a third a medulla of the brain, and in another again certain humours which are destined to be carried off; we know after this explanation as little as we knew before. This unknown cause of the phenomena of life is principally lodged in a certain part of the animal body, namely, in the nervous system, the very operation of which it constitutes. The brain and the nerves determine altogether the chemical processes within the body; and, although it cannot be denied that the exercise of their functions tends to produce chemical effects, we are yet constrained to confess that the chemical operations therein are so far beyond our reach, that they entirely escape all our observations; our deepest chemical researches and the finest discoveries of later times give us no information on the subject. Nothing of what chemistry has taught us hitherto has the smallest analogy to the operations of the nervous system, or affords us the least hint toward a knowledge of its occult nature, and the chain of our experience must always end in something inconceivable. Unfortunately, this inconceivable something acts the principal part in animal chemistry, and enters so into every process, even the most minute, that the highest knowledge which we can attain, is the knowledge of the nature of productions, whilst we are for ever excluded from the possibility of explaining how they are produced." (See Brummark's Translation of Dr. Berzelius's View of the Progress and Present State of Animal Chemistry.)

Here we leave the consideration of the phenomena of vitality, and of the differences between plants and animals. To follow out researches which are strictly within the province of physiology, is not our object; suffice it to have touched upon such points only as are subservient to the elucidation of the subject before us. But we have said enough to lead the reflective mind to a serious consideration of the wisdom and power of God, who breathed into man the breath of life, and made him a living soul. The phenomena of life, these evidences of a mysterious principle, are all arranged by Him; of that principle He is the source; He alone understands in what that "inconceivable something" consists; on His will it depends, and in His hands are the issues of life and death. Let the atheist mock; but let us with deep humility fall prostrate, and adore the Lord of life and glory. M.

MERIT.

The labour of a whole life directed to the object of establishing a merit of our own, will only widen our distance from peace; and we know of nothing that will send this visitant to our agitated bosoms but a firm and simple reliance on the declarations of the gospel.—*Dr. Chalmers.*

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The Judge here represented is Sir William Gascoigne, who committed to prison Henry V., when Prince of Wales, for insulting him while sitting in his judicial capacity. The Prelate is Bishop Walden, who died in the preceding reign; one of the prelates at the time when the Lollards were first publicly burned.

ENGLISH HISTORY.

HENRY V.

HENRY was created prince of Wales on his father's accession to the throne; he was then only ten years of age, but he showed great courage and spirit at an early age. He was personally engaged at the battle of Shrewsbury, and refused to leave the field, though wounded in the face. At the age of sixteen, he was appointed to command in the war against Owen Glendower, and he showed great ability in that tedious and difficult contest.

Henry, in the latter part of his father's reign, was a dissolute character, and indulged in excesses highly unbecoming. This is testified by contemporary historians, though their statements have been exaggerated by dramatists and popular writers. It is also evident, that during the closing scenes of his father's life, he acted in an ambitious and undutiful manner. However, amidst his excesses, he showed himself sensible of what was right. He insulted a judge upon the bench, Sir William Gascoigne, when one of his riotous companions was brought to trial; upon which, the able administrator of justice, unawed by the rank of the offender, ordered the prince to be taken into custody. Henry acknowledged his error, sheathed the sword he had drawn, and submitted to be conducted to prison. Still he continued guilty of acts of violence and excess, even encouraging and assisting his followers in highway robberies. Considerable apprehension was doubtless felt with regard to his future proceedings; but, from the moment of his accession to the throne, he became a decidedly altered character. He lamented his past conduct to his father, shook off his disgraceful companions, and acted with becoming firmness and self-control. So decided a change at the age of twenty-five, speaks much in his favour. He encouraged literature, and became as noted for correctness of conduct, as he had been for the reverse. This victory over himself was far more glorious than his subsequent conquest of France. "He that ruleth his spirit is better than he that taketh a city," Prov. xvi. 32. Yet ambition may have been the ruling passion which induced Henry to contend with these grosser vices; and while it is necessary to show what appear the good as well as the evil traits of his character, let it ever be remembered, that Henry was the cause of many atrocious acts in others, when, as the poet describes, he

"Cried havock, and let slip the dogs of war,"

to glut their evil passions, and ravage the neighbouring lands.

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Henry v. also sought for popularity by acts of mercy. He restored the Northumberland family, treated Mortimer, earl of March, with kindness, and honoured the memory of Richard II. by a splendid funeral.

Yet a false lustre has been cast over the character and reign of Henry v.; while every unprejudiced mind will find it stained with persecution and carnage. The Lollards still maintained considerable influence, and their tenets were more or less favoured by many of the nobles and rulers; by some doubtless on political or worldly grounds, but by others from better principles. Among the latter was Sir John Oldcastle, Lord Cobham, a distinguished general of that day. Arundel did not rest till he had brought him under the ecclesiastical power, on a charge of heresy, immediately after the accession of Henry. The particulars of the accusations against him, and of his examinations, are preserved, and they show his innocence, and the cruel bigotry of the ecclesiastics. The following extracts manifest his conduct under these charges.

"The archbishop examined the prisoner as to his belief, to which he answered, 'I believe fully and faithfully in the laws of God: I believe that all is true which is contained in the sacred Scriptures of the Bible: finally, I believe all that my Lord God would that I should believe.' He was next required to answer the writing sent him by the bishops. With that writing, he said he had nothing to do. The primate then asked, 'Do you believe that there remains any material bread after the words of consecration spoken over it?' After some discussion, 'The Scriptures,' said Cobham, 'make no mention of material bread; in the sacrament there is both Christ's body and the bread; the bread is the thing that we see with our eyes, but the body of Christ is hid, and only to be seen by faith.'" The examination extended to a considerable length, and throughout the whole he conducted himself with true courage and serenity. Friar Palmer, when questioning him concerning the worship of images, said, 'Sir, will you worship the cross of Christ, that he died upon?' 'This,' said Lord Cobham, and he spread his arms abroad, 'this is a cross, and better than your cross of wood, as it is created of God, not made by man; yet I will not seek to have it worshipped.' 'Sir,' said the bishop of London, 'you know that Christ died upon a material cross.' 'Yea,' replied Lord Cobham, 'and I know, also, that our salvation came not by the material cross, but by Him alone who died thereon.' He was condemned, but escaped from the Tower by night, and returned into Wales."

Arundel and his party sought to retain their influence over the mind of the king, and they were not scrupulous as to the measures they adopted for this purpose.

In January, 1414, Henry, then at Eltham, was alarmed by an account that many thousands of the Lollards were assembling in St. Giles's Fields, on the north of London, and that they were headed by Lord Cobham, who intended to dethrone him. The king, with his guards and attendants, hastened to the spot, where they found about a hundred persons assembled in a thicket, who were dispersed without difficulty; some were slain upon the spot, others were taken prisoners and executed. The object for which they had assembled does not clearly appear. Some had been led to expect that Lord Cobham would meet them; but he was a fugitive in Wales. It is possible that there may have been some design, to try whether the Lollards could be induced to aid a conspiracy against the king, for the purpose of resisting the persecutions from which they suffered; but it seems most probable, that the few who assembled, and who appear not to have been people of note, or to have had any regularly organized design, had been collected by the emissaries of the clergy, under false pretences, that they might thereby alarm the king, and excite him to more active measures against the poor Lollards. Perhaps they might have met for the purpose of public worship.

Archbishop Arundel was called to his account a few weeks afterwards. He was succeeded by Chichely, a still more bigoted and violent character. One of the early measures of this prelate was, to involve the monarch in a war with France, in order to call his attention from the measures which were agitated in parliament against the luxury and possessions of the clergy. A favourable opportunity was presented by the distracted state of that country; and, with a cold-blooded desire for wrong, which, perhaps, is hardly paralleled in history, Chichely stimulated the king's ambition, and urged him to make war upon the neighbouring kingdom. The clergy had begun to

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tremble for their possessions; they had relinquished to the crown more than a hundred priories, which were under the rule of foreign monasteries, and they justly apprehended, that the interference with the property of the church, though began with their own concurrence, would be carried still farther.

The state of affairs in France at that time was deplorable. In 1380, Charles v., who had withstood the ambition of Edward III., of England, died, and was succeeded by Charles VI., during whose minority, the princes of the blood harassed the kingdom by factious proceedings. After he had assumed the government, he sank into imbecility or insanity, and the nation was divided between the partisans of the duke of Orleans, the brother of Charles VI., and those of the duke of Burgundy his uncle. These party feelings were increased by the policy of Henry IV. Assassinations and civil war followed; the duke of Orleans perished by the instigation of his rival, though at the time when Henry v. began his reign there was an outward reconciliation between the parties.

Henry, urged by archbishop Chichely, chose this opportunity to claim the crown of France. This was most unjust. He had no hereditary right to the crown of England, and, therefore, had not even succeeded to the claims of Edward III., weak as they were. The unprincipled arrogance of his demand was glaring; but a prince who had been taught to consider battles and slaughter as the noblest employment in which rulers could engage, eagerly availed himself of any pretext, however unjust; and the clergy, anxious to keep the nobility from investigating their encroachments, pushed the monarch forward, and lent the sanction of their religion to this work of robbery and violence.

Henry used every effort to collect a numerous and well equipped army and fleet. He obtained a parliamentary grant, borrowed money, and pawned his jewels, and a large force assembled at Southampton, in the summer of 1415. Here a plot against the king's life was discovered, in which the most active leaders were Scrope, Cambridge, and Grey, who had been favoured by him. They were executed. It is not easy to ascertain the precise causes of this conspiracy. It appears to have been connected with a design to place the earl of March upon the throne, and was, perhaps, stimulated by the popular dislike to the persecutions for religion. The earl of Cambridge was brother to the duke of York, and had married the sister of earl Mortimer. His son succeeded to the rights of both houses, as we shall find in the following reign.

After some negociations, in which the French made large concessions, and even agreed to cede some part of their territory, war was declared. Early in August, Henry sailed for Harfleur, where his army landed with little opposition. The town, however, resisted, and endured a siege of thirty-eight days, but surrendered on the 26th of September. Henry refused to allow his army to plunder the town, but the inhabitants were forced to leave their homes, with only a very small sum of money, and as much of their property as they could carry. During this short interval, the English soldiers were affected by disease, arising from the season of the year, the marshy situation of the place, the too free use of fruit, and the want of attention in removing nuisances, so that they were too weak for any farther effort. Henry resolved, however, to march overland to Calais, with the remnant of his troops who remained in health; a useless act of daring chivalry. Many advised against this measure, but others encouraged it, and on October 9, the king set out on this perilous march of more than one hundred miles, with only about six thousand men.

The French princes had by this time laid aside their disputes, and collecting troops, laid waste the country, and intercepted the march of the English army. The events which followed, remind us of Crecy. A ford over the river Somme was discovered, and the English army passed; but on October 24, Henry found himself at Agincourt, surrounded by the French army, which is said by some to have exceeded the number of one hundred thousand. Instead of impeding the English monarch, and cutting off the invaders in detail, the French leaders determined to make an overwhelming attack upon the little band, and spent the night in revelry and anticipation of success, casting dice to determine who should have the ransom of Henry and his nobles. Henry possessed the abilities requisite for such an emergency, and another proof was to be given that the race is not to the swift, nor the battle to the strong. Both nations were guilty,

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both were to be punished, and the results of the English victory at Agincourt were disastrous to both.

The position of the English army was well-chosen and difficult of access; and though Henry was compelled to begin the battle, yet he contrived that the enemy should not oppose a larger front than his own. The English fought with courage, and even despair. The numbers of the French became a hinderance to them, and added to the confusion which ensued. The field of battle was trodden into mud, by their knights and cavalry, who were burdened by the weight of their armour, and pressed so closely together, that they could not advance or retreat, or use their weapons freely. Very soon the action became a mere scene of carnage, in which the French were often pressed and piled upon each other, in mingled masses of the living and the dead, till they actually became ramparts for the English archers. There was too great confidence on the part of the French at first, and afterwards a panic fear seized a large body who had not been engaged, and who were strong enough to have renewed the contest, had they remained firm, but they fled. Henry engaged personally in the battle, several times he was nearly slain, but was saved by his armour-bearer, and the desperate courage of those around him.

After the action, it was found, that on the part of the English, only the duke of York and the earl of Suffolk, with probably about one hundred private soldiers, had fallen. The French lost about ten thousand, of whom the greater part were men of rank, or knights. A vast number were captured; though in one part of the battle, the French who had been taken prisoners by the English were massacred on account of an alarm excited by some plunderers in the rear. Why the French army did not surround and annihilate their enemies, can only be explained by undue confidence at first, and needless fear at last. Or rather we may consider it as illustrating the words of the prophet; "I will choose their delusions, and will bring their fears upon them," Is. lxvi. 4. The recollection of Crecy and Poictiers also would increase the panic.

Henry now retired unmolested to Calais; for his army was too weak for him to take immediate advantage of his success.

Turner well remarks upon this battle, "The laurel of Agincourt was the prize of temerity without necessity; of a chivalric defiance of danger, too much like ostentatious confidence to be safely commended; and was won, not only against all calculation, but against all reasonable hope. But what reasoning can justify wars and enterprizes that produce such a quantity of human slaughter and suffering, which even the soldiers who inflicted it could not look at without lamenting. Such sympathy and yet such actions, display the anomalous medley which so often deforms human nature. Compassionate, yet cruel; tender-hearted, yet pitiless; benevolent at one moment, unfeeling at another; kind even to animals, and yet ruthless against his fellow-creatures."

On his entrance into London, Henry was received with much pomp and pageantry. He ascribed all his success to the Divine power. It would have been well had this feeling led him more correctly to consider his proceedings; but, though probably sincere, so far as his views went, his false ideas of glory predominated, and his religion had not sufficient power over him, to induce him to give up the indulgence of his passions. Also he sought more and more to conciliate the clergy, and sent an ambassador to the council of Constance which was then sitting, and engaged in persecuting those servants of Christ, John Huss and Jerome of Prague. The fame of the victories of Henry, induced consideration for his country, and England was acknowledged as a nation devoted to support the Church of Rome!

Henry remained in England during the following year. His eagerness for fame was satisfied for a time, and his resources were too much exhausted to allow him easily to equip another army. The consequences of the war were shown by a proclamation in the latter part of this reign, giving leave for the same persons to serve as sheriffs during four successive years, on account of the deaths occasioned by pestilence and foreign contests.

In 1417, Henry resolved to renew his efforts. The parliament granted him a supply, estimated at one-third of the value of the moveables of the laity; and the clergy gave one-fifth of theirs. He landed in Normandy, with twenty-five thousand men, and took possession of the principal towns. Rouen was besieged for six months before it surrendered; and several thousands of the aged and help-

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less, who were forced to quit the place, were not allowed to pass the lines of the besiegers, but miserably perished under the walls of the city. Hollinshed thus describes the sufferings of the besieged, many thousands of whom died from want:—

"If I should rehearse, according to the report of divers writers, how dearly dogs, rats, mice, and cats, were sold within the town, and how greatly they were by the poor people eaten and devoured, and how the people daily died for fault of food; and young infants in the streets, on their mothers' breasts, lying dead, starved for hunger,—the reader might lament their extreme miseries. A great number of poor simple creatures were put out at the gates, which were, by the Englishmen that kept the trenches, beaten and driven back again to the same gates, which they found closed and shut against them. And so they lay between the walls of the city and the trenches of the enemies, still crying for help and relief, for lack whereof great numbers of them daily died." On Christmas-day, the English king allowed some food to be distributed among them, but this was the limit of his compassion; they were prevented from leaving the scene of suffering and blood.

Henry did not show the forbearance of Edward III., who, in like circumstances, permitted the helpless inhabitants of Calais to depart; but after the city surrendered, he caused the mayor or commandant to be beheaded.

At home, the Lollards were persecuted with little mercy. In 1417, Lord Cobham was again taken, when he was condemned to suffer as a heretic, and burned, or rather roasted to death, being hung alive in chains over a slow fire, in St. Giles's Fields.

To a certain degree, Henry endeavoured to restrain his soldiers from the usual ravages of an invading force. Still great atrocities were committed, and the condition of France was truly wretched. Occleve, a contemporary priest, addressed the princes of France and England, in reference to the lamentable state of both nations; and his verses present also a specimen of the orthography of that period. They are as follows:—

Geve them ensample. Ye ben their myrrours,
They folowe you. What sorewe lamentable
Is caused of your werres sharp shours!
There wote no wight it is irreparable.
O noble Cresten princes! Honorable!
For Hym that suffered for your passion;
Of Christes bloode have compassion!

Alass! what people hath your werre slayn!
What cornes wasted, and doun trode shent!
How many a wyfe and maid hath he forlayn?
Castels down beat, and tymbred houses brent,
And drawen down and all to tore and rent!
The harm ne may not rekened be, ne tolde,
This warre wexeth all to hore and olde.

The party disputes in France promoted Henry's views more than the valour of his own troops. After various negotiations, the Dauphin and the duke of Burgundy appeared to be reconciled, when the former caused the latter to be assassinated. Of all crimes, murder is the most atrocious, and the most sure to bring down speedy punishment on the guilty; and in the short space of a few weeks the Dauphin found that his crime had brought down loss and suffering upon himself. Burgundy perished in his iniquity; but his blood was required of the murderer.

In 1420, the parliament presented two petitions against the wars in France. Well would it have been for both nations, if they had been fully actuated by the feeling expressed in the lines of Cowper:—

"War is a game, which, were their subjects wise,
Kings would not play at. Nations would do well
To extort their truncheons from the puny hands
Of heroes; whose infirm and baby minds
Are gratified with mischief, and who spoil,
Because men suffer it, their toy, the world."

But, instead of protecting their country, the leaders of the French factions only sought to follow their own passions. The influence of the duke of Burgundy was the strongest; he agreed to acknowledge Henry as king of France.

The young duke of Burgundy, with the king of France, now insane, the queen, and the princess Catharine, placed themselves under the protection of Henry; and it was agreed by a treaty signed at Troyes, in 1420, that Henry should marry the princess "at his own cost," be regent of France, and succeed to the throne on the death of Charles. Still a considerable part of the French nation refused to submit to a foreign prince, and supported the claims of the Dauphin, though he had been declared incapable of the succession, on account of his crime. He still continued to resist Henry, though the latter was in possession of Paris, and nearly the whole of the kingdom.

The duke of Clarence, whom Henry had appointed regent of England, was

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defeated and slain by an auxiliary band of Scots; while destruction still swept over the plains of France in desultory warfare. The contest was continued to 1422, when Henry, then on a march to the Loire, was attacked by dysentery. About an hour before his death, he desired to know his real state, and on being informed, directed his chaplain to read the seven psalms called penitential. On hearing the name of Jerusalem, he declared his intention to have rebuilt that city, and soon after he expired, at the age of thirty-four, after a short career, but one which the world esteems brilliant; yet when tried by the unerring rule of Scripture, it only tends to show that "the heart of the sons of men is full of evil, and madness is in their heart while they live, and after that they go to the dead," Eccl. ix. 3.

The consideration of such a character presents, however, a salutary test: for as Foster well observes in his Essays, "Let the young and animated spirit, after having mingled and burned in imagination among heroes, whose valour and anger flame like Vesuvius, who wade in blood, trample on dying foes, and hurl defiance against earth and heaven; let him be led into the company of Jesus Christ and his disciples, as displayed by the evangelists: what must he, what can he do with his feelings in this transition? He will find himself flung as far as 'from the centre to the utmost pole;' and one of these two opposite exhibitions of character will inevitably excite his aversion." We need not say which is consistent with the word of God.

The remains of Henry v. were carried to England with much funereal pomp, his effigy, appareled in royal robes, was laid above the coffin, and thus

"——————— the long procession passed
Slowly from town to town; but those who heard
The deep-toned dirge, and saw the banners wave,
A pompous shade, and the high torches glare
In the mid-day sun a dim and gloomy light,
Then thought what he had been on earth, who now
Was gone to his account."—SOUTHEY.

This mighty prince left his country nominally possessed of increased power, but impoverished, and its best inhabitants suffering under persecution. His ambition had weakened the nation, and sowed the seeds which produced the events of the following reign.

THE SIMPLICITY OF THE BIBLE.

THE simplicity of the Bible, or its happy adaptation to the circumstances of mankind, is one of the most striking proofs of its Divine original. That the blind should receive their sight, and the lame walk; that the lepers should be cleansed, and the deaf hear, and that the dead should be raised up, form an irresistible demonstration in favour of any thing they can be brought to prove. But when the Redeemer stated all these things in testimony of his own claims to be the Messiah, he did not think the train of evidence complete until he had added, "The poor have the gospel preached unto them." The heavenly visions which he had seen with his Father, and the particulars of which he came down from heaven to reveal on earth, are made plain and distinct to the human mind; level to the comprehension, not only of the divine, the philosopher, and the scholar, but to the poor. They are like Habakkuk's message, made plain upon tables, so that he who runs may read. It is this very thing which reveals the author of the Bible with peculiar glory; for infinite wisdom is ever displayed by the perfect adaptation of means to an end. The Bible, by its own plainness, evinces its own perfection, and recommends itself to the most uninformed, as a sure guide to everlasting life. If in it there are depths in which an elephant might swim, there are also shoals where a lamb might wade. If it administers strong meat to those who are of full age, it serves the babe with milk. If it prescribes perfection to its reader, it begins by communicating first principles; and he who has learned rightly to divide it, has learned how to give to each his portion of meat in due season. J.

UNSCRIPTURAL NAMES, PHRASES, AND FORMS.

WOULD to God that all party names, and unscriptural phrases and forms, which have divided the Christian world, were forgotten; and that we might all agree to sit down together, as humble, loving disciples, at the feet of our common Master, to hear his word, to imbibe his Spirit, and to transcribe his life in our own!—*Wesley.*

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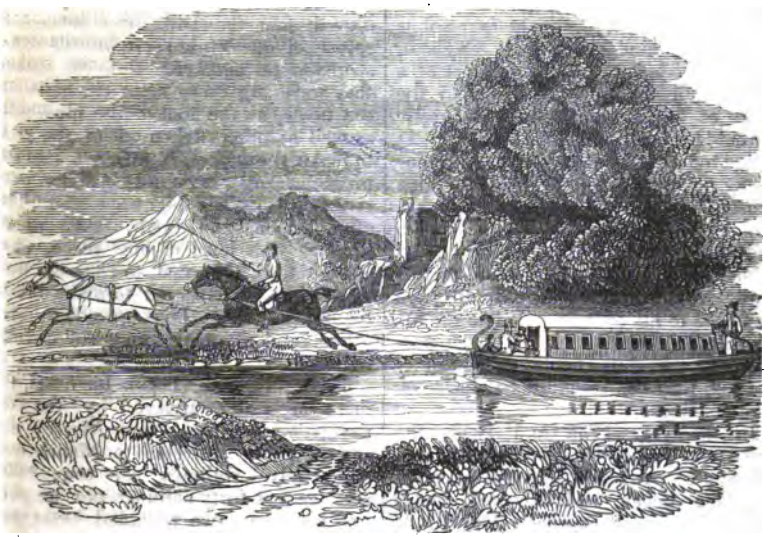

The Passage Boat.

THE INTERNAL COMMUNICATIONS OF GREAT BRITAIN.

CANALS.—No. II.

On the state of our common roads in former times, we have said enough in our last paper: their condition at the present time is too well known by our readers, to require comment; suffice it to say, that their present state of perfection has been gradually acquired since the year 1760. We shall now proceed to our next step, and describe the progress of Canal navigation; for the particulars of which we are indebted to "Phillips' General History of Inland Navigation."

England, in which all the arts and sciences, commerce and agriculture, especially flourish, is an island containing numerous rivers, rendered navigable by art, where not so by nature. The rivers Thames, Trent, Severn, and Mersey, extend far into the country; and almost divide the island into four parts; yet, though four of the principal parts of the kingdom, London, Bristol, Liverpool, and Hull, are commodiously situated on these great rivers, and incessantly crowded with innumerable vessels, laden with the richest productions of the different countries of the world, none of these great commercial ports had, for a long time, any communication with each other, except by a tedious and circuitous navigation, or a tiresome and expensive land carriage. And though we had for example Holland and France so near us, well furnished with canals for inland navigation, yet neither government, nor any public-spirited individual, attempted any works of that nature in England.

The canal for supplying London with water, commonly called the *New River*, first claims our attention. This was projected and begun by Mr. (afterwards Sir Hugh) Middleton, in the year 1608, and finished in five years. This canal begins near Ware, in Hertfordshire, and takes a course of sixty miles before it reaches the grand cistern or reservoir at Islington, which supplies the multitude of pipes that convey the water into the City and parts adjacent. Near Hornsey, it was formerly conveyed over a valley between two hills, by means of a wooden trough, supported by props, and twenty-three feet in height; but of late years the course of the river has been changed and embanked. In other places, meandering round hillocks and rising grounds, it is confined on one side by the solid hill, and on the other by banks very large and thick, or large mounds of earth.

The different rivers which have been made navigable by art, above the

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tideways, do not come within our plan. The first modern canal, therefore, that claims attention, as being the first public work of the kind executed in England, although completed at the expense of a private individual, is that made by the Duke of Bridgewater, in whose praise it would be unpardonable to be silent. At an age too often spent in dissipation by our young nobility, he applied his attention to useful objects, and had the spirit to hazard a great part of his fortune, in an undertaking worthy the pursuits of a prince; which, however, has ultimately proved highly profitable to his family, and beneficial to his country. When the influence of exalted rank, and large possessions, are thus nobly and usefully exerted, they confer additional lustre on the possessors.

In the year 1758 and 1759, the Duke of Bridgewater, after obtaining two acts of parliament for that purpose, projected, began, and executed, under the direction of his engineer, Mr. Brindly, his first canal, which was designed for conveying coals from a mine, or more properly a mountain, on his estate, to Manchester; but it has since been applied to many other useful purposes of inland navigation. This canal began at a place called Worsley Mill, seven miles from Manchester, where a basin was cut, capable of holding not only all the boats required to carry the coals, but a great body of water, which serves as a reservoir or head of the navigation. The canal runs through a hill by a subterraneous passage, large enough for the admission of long flat-bottomed boats, which are towed by hand-rails on each side, near three quarters of a mile under ground, to the coal works. There the passage divides into two channels, one of which goes five hundred yards to the right, and the other as many to the left; and both may be continued at pleasure.

The ingenuity and contrivance displayed by Mr. Brindly throughout the execution of this great work was wonderful; an account of which may not be uninteresting to the reader. The smiths' forges, and carpenters' and masons' workshops, were covered barges, which floated on the canal, and followed the work as it went on, by which means there was no hinderance of business, and as the Duke had all the materials in his own possession, timber, stone, and lime for mortar, and coals from his own estate, all close by, he was at little expense besides labour. It must be observed, that the Duke also made the refuse of one work serve for the construction of another; thus the stones that were dug up to make the basin for the boats, at the foot of the mountain, as well as others taken out of the rock to make the tunnel, were hewn into the proper forms to build bridges over rivers, brooks, and highways, etc. The clay, gravel, and earth, taken up to preserve the level of one place, were carried down the canal, to raise the land in another, or reserved to make bricks for other uses. Thus grandeur, elegance, and economy, were successfully united.

Before the Duke began his canal, the price of water-carriage, by the old navigation, on the rivers Mersey and Irwell, from Liverpool to Manchester, was twelve shillings per ton; land-carriage was forty shillings per ton, and not less than two thousand tons were yearly carried on an average. Coals were retailed to the poor at Manchester, at seven pence per hundred weight, and often dearer. The cost of carriage by the Duke's canal was six shillings per ton, a much quicker conveyance; and the poor had their coals served to them at three pence half-penny for a hundred weight of seven score.

Such was the commencement of that great system of canal navigation which now intersects our country in every part, and from which the nation has derived many advantages. It has not only been the means of enlarging our foreign commerce, but of giving birth to an internal trade, which, with all the advantages attendant on foreign commerce, has perhaps far exceeded it in extent, value, and importance. So great has been the effect which these canals, and the trade to which they have given birth, have had on our industry, population, and resources, that in many instances they have entirely changed the appearance of the counties through which they pass.

The reasons of this change are sufficiently obvious. As consumers, we are enabled by means of canals to import more cheaply; as producers, we export with greater facility. Do the materials of a manufacture lie dispersed, canals bring them together, and supply the persons employed in it with every necessary at the cheapest rate. And the

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land-owner, whether we consider the surface of the soil, or the mines in its bowels, necessarily finds his advantage from new markets, and from having a cheaper carriage both for his productions and his manure.

The great apparent objection to canals, as a means of personal travelling, is their slow progress. The heavy boats which carry goods from London to Birmingham, etc., travel upon an average at the rate of three miles and a half per hour. But light passage boats have been lately introduced on the canals in Scotland, which, by means of relays of horses, are enabled to travel at the rate of ten miles an hour, with about eighty passengers.

The Paisley, or Ardrossan canal commences in the immediate neighbourhood of Glasgow; from which place the fly-boats start at stated periods of the day. The distance to Paisley is eight miles, which is generally gone over in fifty-five minutes, the boats going at their ordinary speed. The boats are constructed of plate-iron, neatly fitted up in every way, and provided with a handsome awning to protect the passengers from the weather: they measure about seventy-five feet in length, and five and a half in breadth; the full complement of passengers is about eighty, but they have carried, when necessary, one hundred. Two horses are found sufficient, with relays, for tracking at the speed above stated, and they canter along the towing path with the greatest apparent ease. Our engraving at the head of this article represents the light passage boat, as above described.

In our next communication we shall discuss the subject of railroads and steam carriages.

ON THE CAUSES OF MELANCHOLY IN COMIC AUTHORS AND ACTORS.

[Translated from "Le Semeur."]

An article has lately appeared in a periodical called *La Paix*, which contains many curious facts; but the writer has not investigated the causes of that melancholy which is constantly to be observed in comic authors, nor has he deduced any of those grand moral lessons that may be learned from such a subject. It is one, however, which deserved the most serious attention, if any higher purpose were in view than the satisfying of a vain curiosity. We shall, therefore, 1. State briefly the facts; and, 2. Follow them up with a few reflections.

Few romances are more seductive to readers than Don Quixote. One day, Philip III., king of Spain, was standing in one of the balconies of the Escurial, observing a young Spanish student, who was sitting in the sun and reading a book, while he was bursting out into loud fits of laughter. The farther the student read, the more his gaiety increased, until at last he was so violently excited, that he let the book fall from his hands, and rolled on the ground in a state of hilarity that partook of the nature of delirium. The king returned to his courtiers, and said, "Surely this young man is a fool, or he is reading Don Quixote." One of the guards of the palace went to pick up the book, and found that his majesty had guessed rightly. Yet, Miguel Cervantes, the author of this book which is so amusing, had dragged on the most wretched existence; his soul was overwhelmed with the deepest cloud of melancholy. He was groaning and weeping, while all Spain was laughing at the humorous adventures of the knight of La Mancha, and the wise sayings of Sancho Panza.

It is well known that the first comic author in France, the man who wrote the ludicrous scenes of The Physician against his Will, The Country Gentleman, M. de Porceaugnac, and The Hypochondriac, was a prey to invincible melancholy. Molière was seldom cheerful, and never without great effort. After having diverted Louis XIV., the court, and the whole city, he carried into his domestic circle, and even into his intercourse with men of letters, a sadness, which the greatest worldly prosperity could never dispel.

Sterne, that wit so full of raillery, possessed an exterior the least humorous that could be imagined. On first seeing this little man in a black coat, a white wig, and a sallow countenance, no one would ever have supposed that he was a jester full of levity.

We could mention few authors who had the reputation of being such entertaining companions as Desaugiers; no one could enliven a company of friends, or set the table in a roar like him. There is not one of his songs which does not breathe the most lively and most unfettered gaiety; and as to the figure of Desaugiers, was it not the most complete type of the

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happiest man upon the face of the earth? Always singing, always laughing, the countenance of Desaugiers seemed to defy the attacks of sorrow; his whole life appeared to be spent in the midst of a continual feast. And yet Desaugiers was sad! melancholy overwhelmed his heart in his most joyous festivals, and amidst his most mirthful songs; if he celebrated so much the pleasures of wine, it was because he sought in it the forgetfulness of that gnawing grief which he concealed from every eye, and would have wished to conceal even from himself.

Comic actors, too, like authors of the same stamp, have been subjected to this secret influence of melancholy, nor have they shared in the gaiety which their appearance merely has excited in others. "Observe Bouffe," says the editor of *La Paix*, "a smile appears but seldom to animate his countenance, emaciated by a state of almost constant disease. Fereol, weary of amusing the pit of the comic opera, without being able to amuse himself, has retired to a country house near Orleans, and is seeking relief from the recollections of the theatre in the midst of his paintings. Probably you may have met a man in the streets of Paris, with blue spectacles and a very miserable air, without ever thinking that you had before your eyes Arnal, one of the most entertaining comedians of the ballad. Samson and Ambrose, those famous comedians of the French theatre, are only comic after seven o'clock in the evening. As to Debureau, the celebrated prince of the rope-dancers, the moment he puts off the coating of flour, with which he has whitened his countenance, he becomes the saddest man in the whole neighbourhood in which he lives."

There is a well-known anecdote of Biancolelli, the celebrated harlequin, whose gambols and drolleries have been the amusement of all Paris, at the theatre of the fair of St. Germain. One day a physician of great eminence in that city, beheld a man entering his study, who came, as he said, to seek the assistance of his skill against a disease which nothing could cure. Having made some inquiries into the causes of his sufferings, the unknown patient replied, that he was afflicted with a deep melancholy, which rendered life an insupportable burden.

"You must drink good wine," said the physician to his patient.

"I have in my cellar the best wine in the world," replied the unknown, "but it cannot make me forget my sadness."

"You must travel, then."

"I have made the tour of Europe, and still my wretchedness has travelled with me."

"Oh! oh! the case is sad indeed, but still there is a remedy; go every evening to the Italian comedy; you will see the celebrated Harlequin Biancolelli play; his gaiety is catching; that will make you cheerful."

"Alas, Sir," said the poor patient, "I see my malady is incurable, I am Biancolelli."

To these examples, quoted by *La Paix*, we might add others every where to be met with, and occurring almost every day. Who are the men most ill tempered in their own houses, men of the most morose and captious dispositions, who quarrel with their wives, and children, and servants, who know not what to do with themselves, or how to get rid of their weariness? They are commonly such as exhibit in society the most jovial character, the utterers of witty expressions, the drolls, who are saluted on their entry into a place with bursts of laughter, and whose inventive powers in buffoonery are inexhaustible. When they have thus for hours been amusing the frequenters of the saloons, they have returned to their own homes with heavy hearts and empty heads, weary of themselves, and distressing others with their ill humours. Their gaiety is a mask, which they put on for a night, and take off when they enter their own houses. Who has not met with persons of this double character? professed jesters amongst others, intolerable in their own domestic circle, as full of discontent in their own families, as they are of boisterous merriment in the face of the world.

There is not, perhaps, one of our readers, who has not experienced the same sensations in himself. At what time are men most exposed to the approaches of melancholy and sadness? on what day and in what hour are they in their saddest mood, when all objects around them appear most discouraging? Is it not after such assemblies of pleasure, after they have been giving way to a foolish and intoxicating mirth, after they have been partaking of these frivolous amusements, the "laughter of fools," as they are called in the Holy Scriptures? They have left these houses of feasting,

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these spectacles of vanity, more sad, more dejected, and more disposed to irritation of temper. Why is this? It is not difficult to be explained.

Man by instinct, by situation, by duty, is called on to be serious. And let no one mistake here; the seriousness of which we speak is altogether different from sadness and dejection. It is the gravity of an intelligent creature, who retires within himself, who comprehends the greatness of his moral obligations, and to whom an important mission has been intrusted. It is the will of God that we should be serious; He has implanted both the principle and the need of this seriousness in our very nature. So really is this the case, that the moment a man finds himself alone, placed, as it were, face to face with himself, and left to his own thoughts, he immediately becomes serious. Not to be so, he must do one of two things; either he must retrace in his memory those comic scenes in which he has been engaged, and bring them back in his imagination, or he must take refuge in an amusing book, or some such source. In both cases, every one must observe that the man gets out of himself, turns off his eyes from himself, in fine, cheats himself, to avoid being serious. He does violence to the instinct, which his Creator has endowed him with, and places himself in a factitious state; he employs stimulants, which produce a confusion in his moral nature, similar to that which spirituous liquors produce in his natural constitution.

And not only man is instinctively serious, every thing that he sees in this world, every thing about him is serious also. The firmament with its thousands of stars, that move in constant harmony, is a solemn spectacle. This globe with its plants and fruits, presents a serious aspect. The animals are serious. The whole universe, in whatever point of view we behold it, whatever part of creation we examine, is serious. Certain philosophers have inquired, why man becomes serious, and even feels a kind of melancholy, every time he comes directly in contact with the grand scene of the exterior world. This impression, we think, is sufficiently accounted for by the seriousness that is spread over all the works of nature; and if this gravity is often accompanied with sadness, this arises from the contrast that man cannot fail to perceive between the peaceful majesty of the creation, and the tumultuous emotions of his own heart.

Man never laughs when he is alone, without the presence of external excitements; he never laughs when he is contemplating the universe. Consider the subject closely, and you will see, that laughter always has its source in circumstances that belong to man alone, in the misfortunes, the mistakes, the defects, and the vices of man. Not that we would blame laughter, as some moralists have done, and charge it in all cases with every thing that is sinful. It is sometimes harmless. But what is necessary to be well understood, because our social and domestic relations often lead us to misunderstand it, is, that the mirth that manifests itself in loud bursts of laughter, the foolish gaiety, which is boisterous and deafening, that systematic merriment, if we may use the expression, which characterises the lives of certain men, is a state contrary to nature, opposed to Divine Providence, and adverse to the commands of our Creator with regard to us.

The preceding observations may suffice to solve the moral problem laid down by the editor of *La Paix*. Comic authors and actors must necessarily be more sad than the rest of mankind, for the very reason that it is their object to make others gay. They have adopted a profession which obliges them to struggle with their natural inclinations, and the reaction springing from this is in proportion to the violence which they have put upon themselves. They cannot stop within the bounds of that gravity which is natural, after their task is finished; but they sink into a state of ill humour, disgust, and even misery. We would not say, that comic authors and actors themselves have a clear and distinct knowledge of this reaction; it is most probable they have not. The world requires of them that which renders them sad and melancholy, and most of them can do nothing but answer the demand. But our explanation is not, therefore, the less just. There are many feelings that the majority of mankind appreciate only by their effects, and of the causes of which they have no knowledge: they experience them, they are happy or miserable under them; but they cannot explain whence they proceed. Harlequin Biancolelli amused all the world, and was miserable himself while amusing them. Had he consulted a

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religious moralist, instead of going to a physician, he would have learned that his moral nature was revenging itself for the force put upon it every evening of his life; he would have learned further, that it is most natural for a being, who goes counter to the very first great law of Divine Providence, and applies himself to the business of being merry, while God has created him to be serious, to be overwhelmed with insurmountable melancholy. In the same manner may be explained the contradiction that appears in the character of Desaugiers. As to Sterne and Molière, they needed not to consult any one; they had sufficiently read their own hearts to know what inspired them with so deep a melancholy.

It may seem a paradox, at first sight, to maintain that peace is the sister of gravity, and that the most serious man, in the Christian sense of the word, is at the same time the happiest man. But experience attests that it is a great truth. If we inquire, Who is the least miserable upon the earth? we must look at the man who is most serious, and whom perhaps superficial observers may accuse of being melancholy. This man conforms himself to the designs of Divine Providence; he is in that moral condition which his Creator has appointed for him; he is serious, because God designs him to be so; and true happiness, both in this world and that which is to come, is always the portion of the man who does the will of God.

THE APPLICATION OF ELECTRO-MAGNETISM AS A MOVING POWER.—No. I.

The present age is distinguished from all others by innumerable advantages; among which may be classed, the great facility of intercourse between men and countries, whether separated by land or water. An aged relative of mine, who has resided for more than sixty years in a small town, about thirty miles from London, informs me, that he remembers the time when a coach from thence to the metropolis was ten hours in performing the journey; and the passengers were accustomed to take two meals on the road. There are now many coaches which run to and through the town, and those which travel slowly perform the journey in three hours and a half. But if there were a railway instead of a coach road, an hour would be amply sufficient. We have travelled from Manchester to Liverpool, on the railroad, in forty-two minutes, a distance of thirty-two miles. When we consider the vast saving of time, and, consequently, of money, arising from the increased speed of travelling, we shall at once perceive that the present generation must be in possession of advantages much greater than those enjoyed by any which have preceded it. Fifty years ago, a journey of thirty miles occupied an interval of time in which we may now, with a suitable line of railway, travel three hundred with ease.

But we may be asked, What advantages result from the increased facility of communication between the different parts of this country? There are many; and we can only refer to a few of them. Commerce is, in the first place, increased, and commerce increases industry, which is a source of happiness and improvement to the human race. The increase of commerce promotes the comforts of all classes of the community, and as the arts are always advanced in proportion to the demand for labour, man is relieved from the most burdensome part of his bodily exertion, and depends more upon the power and energy of his mind. These are advantages which necessarily flow from an increased facility of communication between men and communities. These, however, are temporal, and, although they save time, do not necessarily improve the best interests of mankind. Yet how much, under the special providence and grace of God, are we indebted to the same cause for the dissemination of the Bible and religious tracts, for our knowledge of the deplorable ignorance of our fellow-men, and for the consequent sending forth of those who declare the glorious tidings of God manifest in the flesh, reconciling the world unto himself. We are, in fact, inclined to think that God has used, and is using the various inventions of men, made, perhaps, in the first instance, with no other prospect than personal fame or advantage, to promote the welfare of his creatures and his own glory.

The application of steam, as a moving power, has been brought to a state bordering perhaps on perfection. We, in all probability, are in possession, at the present time, of nearly all the power that can be derived from the expansive force of steam, and we have given it almost every

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application of which it is susceptible. It is a motive force which may be used for any purpose, from that of turning a grindstone to that of giving motion, and one of great velocity too, to a ponderous engine and a long train of loaded carriages. By its assistance we may plough the mighty waters in spite of tides, currents, and winds, which may impede, but cannot destroy the motion it generates. By its aid also we cut our timbers, form iron into the shapes we require, carry on our principal manufactures, and transport ourselves from place to place, according to our wishes. Yet this mighty force we have called into activity is frequently too powerful to be controlled. Safety valves and other contrivances, intended to restrict and direct its energies, have been invented; but, in spite of these, it is often the cause of destruction to human life. The fears of men have been thus excited, and every one is hoping that some force of equal energy, but more under the control of man, may be discovered.

This wish seemed, at one time, to be so far from accomplishment, that many persons did not hesitate to state, that no force existed in nature which could supersede that derived from the expansive power of steam. A new era is now dawning upon mechanical science; and, at no very distant period, we may hope to be in possession of a power, which will be applied with more facility and less expense to machines than steam, and will, at the same time, be *altogether free from danger*. This agent is called electro-magnetism, and has not been long known to scientific men. But before we attempt to explain the manner in which the electro-magnetic force is to be applied as a moving power, it will be necessary that we should attempt to illustrate the nature of the phenomena presented by this agent, and speak of the progressive discoveries by which we have come to a knowledge of its power as a mechanical agent.

Philosophers were accustomed, for many years before their suppositions were proved to be true, to speculate upon the probable connexion between electricity and magnetism. There were many reasons for indulging this opinion. In the first place, they both possessed polarity. All our readers are, probably, aware, that, when two magnets are brought near to each other, they always arrange themselves in a particular manner—the north pole of the one being opposed to the south pole of the other. If the two north poles, or the two south poles, be brought together, they will repel, or fly from each other, as soon as they are left at liberty, and the north pole of the one be directed to the south pole of the other. This is called the polarity of the magnets. Now, bodies charged with electricity present a similar phenomenon. If one substance be charged with electricity from a piece of sealing-wax rubbed with flannel, and another from a piece of glass rubbed with silk, they will attract each other; but if the same substances be both charged from glass, or both from sealing-wax, they will in either case repel each other. These results bear a strong resemblance to those produced by magnets, and, on this account, many persons were inclined to the supposition, that a strong connexion existed between the two agents electricity and magnetism. But there was a stronger reason than this. Electricity was known to have a great influence upon the magnetic force. Franklin proved by a course of most interesting experiments, that lightning was a result of atmospheric electricity, and there was no doubt in the minds of electricians, that the aurora borealis, a phenomenon frequently observed in cold countries, was produced by the same agent. But the aurora borealis was known to affect the magnet and cause it to deviate slightly from its ordinary direction. Electricity, however, has a more evident effect than this upon magnets, for it can both produce and destroy them. If a small magnet be placed in a helix of copper wire, that is, a piece of copper wire twisted into the form of a common corkscrew, and a strong charge of electricity be passed through it, the magnetism of the needle will be either destroyed or disarranged. The compass needles carried in vessels have often been destroyed or reversed when the vessels have been struck with lightning. So, on the other hand, magnetism may be induced by electricity; for if a charge of electricity be passed through a sewing-needle, placed in a helix of copper wire, it will receive the magnetic principle, one pole becoming north and the other south. Electricity therefore, has a wonderful power over the magnetic principle; in some instances deflecting the needle from its usual direction, and in others, absolutely

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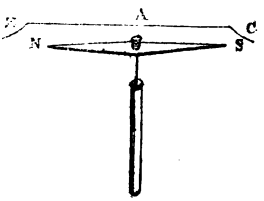
destroying or disarranging its peculiar property of polarity. Electricity also is able to produce magnetism; and it has been more recently discovered, that a magnet may be made to give out electricity, attended with all its ordinary effects, such as giving light, heat, and even shocks to the animal system.

All our readers must be acquainted with the common electrical machine, but this is not the instrument usually employed to exhibit the mutual influence of electricity and magnetism. The galvanic battery produces electricity as well as the common machine, and the agent developed by its activity, is found to be more suitable for electro-magnetic experiment. The galvanic battery consists of plates of copper and zinc, arranged in pairs, and between each pair a small trough is left, into which water, acidulated by sulphuric acid, is poured. By the contact of the metallic plates, and the chemical action between the zinc plate and the diluted sulphuric acid, electricity is given out, and if a piece of wire be brought into contact with a copper plate at one end, and a zinc plate at the other, the current of electricity will circulate through the wires when they are joined, or through any body placed between them. The electricity thus produced is distinguished from that excited on the machine, by the name voltaic electricity, so called, because Volta, a celebrated Italian philosopher, was the first who successfully devoted himself to the study of its phenomena.

With this preliminary information, the reader will not, perhaps, find much difficulty in understanding those facts and experiments in electro-magnetism, which it is necessary to explain, before we can show how the agent is to be applied as a power for moving machines.

About the commencement of the present century, the attention of philosophers generally seemed to be directed to the discovery of the relations between electricity and magnetism; but we are indebted to Professor Oersted for the first discovery which led, by almost imperceptible degrees, yet with great rapidity, to some of the most important discoveries ever made in the whole range of science. This philosopher found, that when the wires proceeding from the end of the galvanic battery were brought so together that their ends, or poles as they are sometimes called, touched each other, and a magnet was suspended below them, the directive power was disturbed. The end next the negative side of the battery moved westward, and that next the positive side eastward. When the needle was placed above the wires, directly opposite effects were produced; the end which moved eastward in the former experiment, now turned westward.

This discovery proved, most conclusively, that the voltaic electricity had a control over the magnetic principle, and it laid the foundation for a series of experiments instantly commenced by nearly all the most eminent philosophers of Europe. These results may easily be obtained by any of our readers who have a small voltaic battery; indeed a single pair of copper and zinc plates will be sufficient for the purpose. The following diagram will show the manner in which the experiments are to be performed:



Z A C represents the wires from the battery; Z that end in connexion with the zinc plate, and C that in connexion with the copper. They join at the point A, and as soon as the contact is formed, the needle, N S, will be affected in the manner already described.

Soon after Monsieur Oersted had made his first experiments, proving that the voltaic electricity has an influence, when circulating through conductors, upon magnets, it was discovered that conducting wires produce temporary magnets while they are transmitting the electric fluid. If a piece of wire be twisted round an iron rod, so as to have the form of a corkscrew, called a helix, and the two ends be connected with a battery, one with the zinc, the other with the copper end, it will become magnetic. This being ascertained, it was quite evident that temporary magnets, of great power, might be formed. One of these may be seen in the Gallery of Practical Science, Lowther Arcade. A piece of

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soft iron is hammered into the form of a horse-shoe, and round it a copper wire is twisted: as soon as the two ends or poles are connected with the voltaic battery, it becomes magnetic, and is able to carry great weights. We have given a representation of one of these electro-magnets, supported between three legs, called a tripod stand, in the following diagram, and carrying a flat board on which weights are placed. Electro-mag-

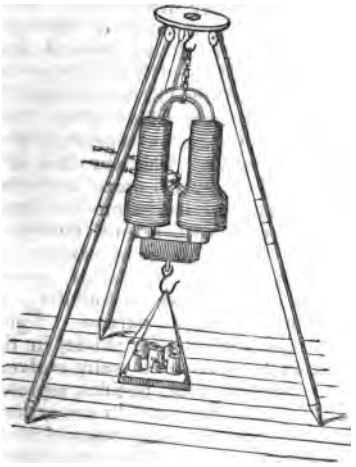

Diagram of Electro-Magnet.

nets, of this kind, have been made so large and powerful, as to carry 20 tons weight; but the moment either of the wires is taken from the battery, the circulation of the electric current ceases, and the weight falls: in fact, the temporary magnet loses all its power, and is no more capable of exhibiting magnetic phenomena, than any piece of soft iron in a blacksmith's shop.

As it is by no means difficult to make an electro-magnet, and as some of our readers may wish to try their skill, we may give them a few hints, which will prevent failure. Provide a sound piece of soft bar iron, and turn it into the form of a horse-shoe. Great care must be taken that the iron shall be soft, for if this be not regarded, failure is inevitable. Even the hammering necessary to turn the iron into the desired shape will be sufficient to harden it slightly, and decrease the effect required. When the iron has been formed, it is therefore desirable to place it again in the fire and raise it to a red heat, after which it should be left to cool, and on no account be cooled by being placed in water. Then bind tightly round the horse-shoe a piece of silk. This is done to prevent the electricity, which is to circulate through the wire, from passing into the iron, and is called by electricians, an insulator. The wire must then be bound round the iron, the ends being left sufficiently long to connect with a galvanic battery. The wire also must be bound round with silk, or varnished with a resinous substance, if the whirls are allowed to touch each other; if not, it will be of no importance to attend to this. The electro-magnet will then be finished, and it may be put into action by a single pair of zinc and copper plates, separated by acidulated water.

The reader must have observed, from the description we have given, that the electricity does not circulate through the iron, but through the wire. It acts, therefore, upon the iron, producing magnetism at a distance; and in the phraseology employed by scientific men, the magnetism is induced, that is to say, it is produced by the formation of a particular condition without contact.

Having thus explained, by illustrations, what is meant by electro-magnetism, and electro-magnets, and also described one or two interesting experiments, we shall be prepared to understand some other statements leading us towards the main object of this paper.

In the year 1821, Dr. Faraday commenced a series of experiments, which led him to a new and altogether distinct feature in the science. His first object was to repeat Oersted's experiments; but during the course of his observations on the effects produced by altering the position of the conducting wire, he was led to the supposition, that but for the impossibility with the magnet suspended in the usual way, he could make the wire revolve round the magnet, or the magnet round the wire. This eminent philosopher found himself surrounded with many difficulties in his attempts to accomplish these objects; but they were all ultimately overcome, and we have now convenient instruments for the exhibition of these rotations. A rotatory motion being once produced, the attention of observers generally was excited, under

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the hope that electro-magnetism might, at some period, be applied to machines, as a moving power. From that time to the present our knowledge of this wonderful agent has been gradually increasing; its operations, under varied circumstances, have been watched; its power ascertained; and now we are on the eve of discovering the manner in which it may be made available to the most important purposes of general mechanics. So much are our anticipations excited, that we think it probable, that in a few years it will supersede the steam engine, and be introduced, not only in our manufactories, but also on our railways and navigable rivers.

It has been frequently remarked, that great scientific discoveries are not unusually made at nearly the same period by persons living at great distances from each other. This has been peculiarly the case in the efforts now making to apply electro-magnetism to the movement of machines. Professor Jacobi says, in the introduction to his memoir on the subject, "I had the honour, in November, 1834, to lay before the Academy of Sciences, of Paris, a note upon a new electro-magnetic apparatus. That note was read at the meeting of December 1; and an abstract of it was printed in the Institute, No. 82, of December 3, to which I refer. Since that, M. M. Botto and Dal Negro have claimed the priority of the invention. The competition in which I find myself engaged with such distinguished men, serves only to confirm my conviction of the importance of this new motive power." In December, 1832, Dr. Schulthess delivered a lecture before the Philosophical Society of Zurich, in which he asks, "Whether such a considerable power as that which is obtained by interrupting the electric current, and then restoring it, could not be applied with advantage to mechanical science?" And in January, 1833, he exhibited an instrument in which this had been accomplished, before the Mechanics' Society. In the following February, he read a lecture on the subject, in which we find the following passage:—"If we consider that electro-magnets have already been made which were capable of carrying twenty cwt., and that there is no reason to doubt that they may be made infinitely more powerful, I think I may boldly assert, that electro-magnetism may certainly be employed for the purpose of moving machines."

In November, 1832, Salvator Dal Negro, the Professor of Natural Philosophy in the University of Padua, published a paper in which he explains the manner he adopted in applying electro-magnetism as a power to move machines. "Philosophers have already known," he says, "for some time, the power of electricity to make soft iron magnetic. In the year 1825, Sturgeon magnetised cylindrical horse shoes of soft iron, by means of copper wires wound round them, connecting the ends of the wires with the plates of an electrometer. Professor Van Mole, of Utrecht, saw this experiment performed in the physical laboratory of the University College, London, and he obtained on repetition some remarkable results. This new method of communicating such great attractive power to iron, created in me the desire of repeating the experiments, and principally of taking into consideration the application of this attractive power, which, it appears, may be infinitely increased to some useful purpose. I give these experiments to the public, in the conviction that a force so easily evolved, and so very powerful, justifies repeated and varied experiments. In my experiments, the electrometers employed were, without doubt, smaller than any hitherto used, and these, notwithstanding, produced the same results. New circumstances and new laws were observed and discovered respecting the manner of increasing the magnetic power evolved by electrometers; of producing in them currents now similar and now different, sometimes in the same, sometimes in opposite directions; and by the success of these experiments of setting a lever in motion in different ways, and thus finally enriching natural philosophy with a new motive power."

These and many other philosophers were engaged at nearly the same time in similar researches; and although they have taken somewhat different means to accomplish their purpose, they have all done something towards the advancement of that object to which they devoted their attention.

Next month we shall describe the principle of the instruments proposed as electro-magnetic machines.

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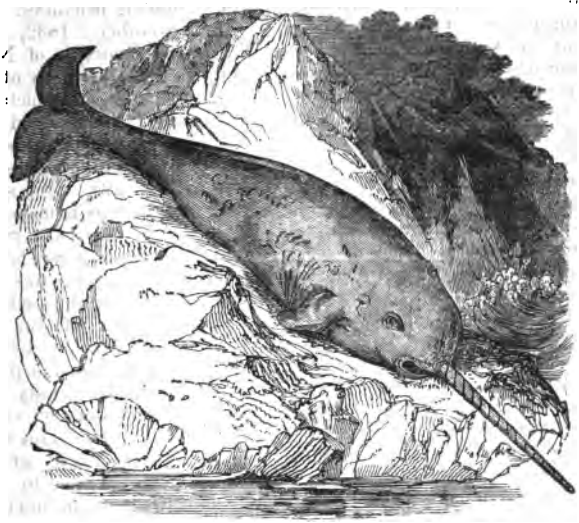

The Narwal.

THE NARWAL.

In the torrid regions of the globe present us with the hugest of terrestrial mammalia, the elephant, the hippopotamus, the rhinoceros, and the giraffe; it is amidst the polar seas, where glittering icebergs threaten shipwreck and destruction to the adventurous navigator, and where icefloes stretch for leagues around, that we are to look for the hugest of aquatic mammalia, nay, the hugest of all living things. It is there that the whale, and the finner, and the cachalot plough the waters, dash the billows to foam in their gambols, and plunge into the tranquil depths, many fathoms below the reach of the arctic frost, or the arctic storm. Among these monsters, which revel in their ocean home, the narwal holds a conspicuous place, and is at once to be distinguished from them all, by the long ivory spear which projects, horizontally, from its snout, and constitutes a tremendous weapon, giving to its possessor every advantage in its contests with the whale, or still more formidable cachalot. What, indeed, can resist the shock of such a lance, driven by the whole force and weight of a huge monster, rushing at full speed through the water? In fact, the rapidity of the narwal, combined with its skill in the use of its weapon, renders the capture of the animal not only difficult, but extremely dangerous. The ribs of the stoutest boat would be as easily transfixed by the dint of the thrust of its spear-like tusk, as if they were made of paper; nay, many are the instances on record in which the animal has driven his weapon deep into the thick sides of a ship, when, fortunately, it has snapt short, and so plugged up the orifice it made. Nor does the narwal hesitate to attack either boats or ships, or the colossal whale, or whatever interferes with him in his wide-spread dominions. Agile, as he is rapid, he attacks and returns to the attack, now on one side, then on the other, with frightful velocity; his levelled spear prevents his enemy from closing in upon him, and thus, beyond the reach of retaliation, he plunges it into the body of his foe. Not only has the tusk of the narwal been found imbedded in the hull of ships, but also deeply fixed in the body of the largest whales, broken off by the violence of the shock. We are informed, indeed, that the whale, mighty as he is, is peculiarly obnoxious to the assaults of the narwal, which, though much smaller than that giant of creation, is much more active and fitted for the combat. Some naturalists have even supposed that there existed a sort of natural antipathy between these two animals, a conflict necessarily ensuing wherever they chanced

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to meet, which usually terminated in the death of the whale. Others have conjectured, that the combats, which all agree frequently take place between them, arise from the fondness evinced by the narwal for the tongue of the whale, which forms a favourite article of its food, as it is also of the grampus, which is reported to attack the whale in troops, worry it to death, as a pack of hounds the stag, or other large game, tear out its tongue, and devour it. This may be the case; it appears, however, that small fishes and mollusca constitute the chief portion of the diet of the narwal. We cannot indeed believe that its long term of life is spent in dreadful and incessant contests either with the whale or with other powerful tenants of the same seas. Few animals habitually prey upon any but such as fall easily before them; the tiger strikes down with a blow the antelope, or the horse, or the buffalo; but he interferes not, unless irritated, with the elephant or the rhinoceros: these animals, secure in their bulk, wander unmolested by the most ferocious of terrestrial brutes, through the woods and jungles of their native country. So is it, we have every reason to believe, with the whale; an enfeebled or wounded individual may, indeed, be assaulted by a shoal of grampuses, (animals which attain to the length of 20 or 25 feet,) and perish under their ferocious attack; the narwal may occasionally drive his spear into the side of the whale, and repeat his blows till the waters are dyed with blood, and the mighty beast at last floats dead upon the surface; but we doubt whether such scenes are of every day occurrence. There is, perhaps, less reason to doubt that the whale, when dead, having perished by accident, or in consequence of injuries inflicted by the harpoons of fishermen, affords a welcome meal both to the narwal and other huge carnivora of the deep. Indeed, as the name of the narwal imports, dead or putrid animal bodies are said to be eagerly sought for and devoured, and are regarded as ordinarily constituting a portion of its diet. *Nar*, in Icelandish, signifies, we are informed, a dead body or carcase; and *wal*, *wale*, or whale, is an indiscriminate appellation for the cetacea in general, in all languages of teutonic origin. Though the narwal is by no means rare in the polar seas, the difficulties attending its capture (which from what we have said may be very easily conceived) account for the imperfection of its history, and sufficiently explains why so little is known respecting its anatomy. Lacepede informs us, that in February, 1736, an individual was seen at Hamburgh which had ventured up the Elbe, driven by a strong current and a high sea; but we do not learn that any notice was taken of it, at least by the scientific.

It is by no means at all times that the narwal exerts his astonishing velocity: he is often observed quietly and gently pursuing his course; and this is more especially the case when numbers are assembled together, as is sometimes seen in bays and inlets free from ice, as well as in the open sea. Clustered together, they form a compact phalanx, which moves slowly along; but the independent movements of each individual are thus necessarily restricted. When attacked at such a moment, they are therefore embarrassed, they impede each other; the hind ranks press upon those before, running their long weapons over each others glossy backs, and all is disorder and confusion. It is, therefore, when the narwals are seen in troops, that they are most open to the attack of man, and that the danger of the enterprise is diminished; hence such an opportunity is one of great importance to the Greenlander. Independently of the oil which this animal yields, in considerable quantity, and of very superior quality, its flesh is much prized by the Greenlanders as food, and is dried and smoked over the fire of their huts; the intestines are regarded as absolute delicacies. The tendons of the muscles serve to make thin but excellent cordage; and, according to Duhamel, (see his *Traité des Pêches*), they obtain from the gullet several membranous sacks, which they make use of in their fishing excursions. Whence, observes Lacepede, this animal has been supposed, as the rorquals, or sharp-nosed whales, (*balænoptera*,) to have under the throat a large reservoir of air, an extensive swimming bladder, although no folds of the skin, as in those animals, announce the existence of such an organ. Of the ivory spear, or tusk, which in compactness and fineness of texture exceeds that of the elephant, the Greenlanders manufacture arrows for the chase; they also use it as stakes, etc., in the construction of their huts.

The narwal has been often termed the sea unicorn; but the term unicorn is inadmissible, inasmuch as there are, in fact, two of these tusks imbedded in the

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intermaxillary bones, though it would appear that the left only becomes developed, under ordinary circumstances, so as to represent a levelled spear, and this in the males alone; the females,* and indeed the young males, having them concealed with their bony sockets. This long tusk is straight, tapering to a point, and spirally twisted throughout its whole length; in its growth, it resembles the tusk of the elephant, being, like that, hollow at its base or root, and solid at its extremity. We have seen it ten feet in length. It must not be supposed that the right tusk in the male narwal never becomes developed; on the contrary, instances occasionally occur in which the right tusk projects externally nearly as far as the left; and we are inclined to believe that, when the left becomes lost or broken off by accident, the right developes itself, to replace the deficiency. That two tusks have been seen, in the narwal, projecting from the mouth, is certainly a fact; and one, moreover, which leads us to consider the right rudimentary tusk alluded to, as a milk-tusk, or, in other words, a deciduous tooth, waiting only for the developing of the permanent tusk (should circumstances demand its growth) to be driven onwards, and fall out. Such is Sir E. Home's opinion. He observes, that "as the permanent tusk in the narwal begins to form in a direct line, immediately behind the origin of the milk-tusk, the great purpose of the milk-tusk is evidently to open the road for it, and to direct the course of the permanent tusk, till it is completely pushed out by it. Dr. Fleming, however, doubts the correctness of this hypothesis, which, as he remarks, 'an examination of the dentition of very young narwals can alone determine.' This rudimentary tooth, which lies within the socket of the right intermaxillary bone, is slightly twisted with a dextral turn; it is solid throughout, blunt at the point, and bent a little towards the base, the face of which is oblique, smooth in the centre, and uneven towards the margin, and bordered by a ring of tubercular eminences." Its usual length is about nine inches. Cuvier observes, that the narwal "has indeed the germ of two tusks, (*défenses*,) but it is very seldom that they both grow equally. In general, it is only that on the left side which becomes developed, while the latter remains, during the whole of the creature's life, concealed within the right abaculus."

The narwal is from two to three times as long as the tusk. One killed near Spitzbergen, in 1813, by Capt. Scoresby, measured fifteen feet, exclusive of the tusk, which projected externally five feet. Of the vital heat of the blood of the cetacea, which inhabit the polar seas, some idea may be formed from a circumstance stated respecting the individual just alluded to; "Its blood, an hour and a half after death, was at the temperature of 97°." How wisely is it ordered, that animals exposed to the cold of an arctic winter, and dwelling in the midst of a sea bound up for leagues with ice-fields, or crowded with floating icebergs, should have the vital power of generating a high degree of bodily heat, in order to resist the effects of a temperature, for months together below zero!

To return, however, to the narwal. The usual length of this animal does not appear to exceed sixteen or eighteen feet, though it is occasionally seen larger. Sowerby in his British Miscellany states, that the individual driven ashore in 1800, near Boston, in Lincolnshire, was twenty-five feet long; it had two tusks, five feet six inches long. With the exception of the tusks, the narwal has no teeth; its jaws are, in short, unarmed with these instruments for tearing or grinding food; a fact which at once proves that its usual diet consists of soft matter, such as mollusca, fish, etc. Captain Scoresby found the remains of cuttlefish in the stomachs of several which were opened by him: similar remains were also found in the stomach of the one driven ashore near Boston.

In its general figure, the narwal resembles the grampus or the porpoise; the muzzle, however, is blunt and rounded; the mouth is small, and instead of a dorsal fin, a sharp ridge two inches in height, and two feet and a half in length, runs along the middle of the back; the eyes are small and black, and the blow-hole, which is placed directly over them, is a single opening, of a semicircular form, and upwards of

* Sometimes the females have a tusk projecting, and even two, if we may credit the following statement mentioned by Lacepede. Captain Dirck Peterson, commander of a vessel, (the Golden Lion,) brought to Hamburg, in 1689, the skull of a female narwal, having two tusks implanted in it; the left was seven feet five inches, the right seven. Captain Scoresby brought home the skull of a female in which the two tusks projected 2¼ inches, and this was examined by Sir E. Home.

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three inches in breadth. The fins are twelve or fourteen inches long, and are placed at one-fifth the length of the animal from the snout. The tail is about twenty inches long, and between three and four feet in breadth; the circumference of an individual fifteen feet long, at the thickest part of the body, was eight feet five inches. The general colour of the skin on the back is yellowish white, marbled with a dark tint of grey. The ground colour becomes lighter on the sides, and the marbling changes into spots, which disappear on the under surface, which is whitish. The young are much darker than the adults.

It is yet a matter of doubt whether there be more than one species of narwal, the *monodon monoceros* of Linnæus. Lacepede considers that there are two, the common narwal, and the small-headed narwal, (*monodon microcephalus;*) and such is also the opinion of Dr. Fleming. Cuvier, however, in his last edition of the *Regne Animal*, positively states that there is but one; and in a note adds, that the *monodon microcephalus* of Lacepede, as figured by that author, is only a common narwal, a little less miserably drawn than it is in the preceding plate. The subject, therefore, remains to be settled.

It was formerly supposed that the ivory of the narwal was an antidote against pestilential maladies; and various authors, as *Bartholin*, *Wurmius*, and others, have entered largely into the subject. "The kings of Denmark had, it is said, and perhaps have still, a throne composed entirely of narwal's tusks, in the Château de Rosenberg." Such was the ignorance and superstition of by-gone days. In our time, the ivory of the narwal is valued for its close texture and great hardness: fine specimens of the entire tusk may be seen at many of the cutlers' shops in London, as well as in various museums.

The narwal is registered among the subjects composing the zoology of the British islands; for though, as we have said, its proper and peculiar abode is amidst the icebergs of the polar ocean, it is, nevertheless, not unfrequently seen off the northern shores of Scotland, and the adjacent isles; but its visits are, in all probability, merely casual.

In contemplating this animal, which, less as it may be than the whale in size and strength, is yet capable of coping with that colossal monster, and of waging successful war against the fiercest and most powerful tenants of the sea, we cannot but view the power of the God of nature, who in his wisdom has created it, and endowed it with weapons which render it formidable to every antagonist. It "passeth through the paths of the sea," and testifies of the great Creator, who has appointed it to fill up its place in the economy of living beings, and for purposes which we cannot unravel, made it as is, with appetites and instincts in accordance with its structure. M.

INFANTICIDE IN THE SOUTH SEA ISLANDS.

Frequently have our feelings been most powerfully excited at the examination of our school children; and scenes more affecting than some which have been witnessed on such occasions, it is scarcely possible to conceive. One of these, which occurred at my own station at Raiatea, I will briefly describe. Upwards of six hundred children were present. A feast was prepared for them, and they walked through the settlement in procession, most of them dressed in European garments, with little hats and bonnets made by those very parents who would have destroyed them, had not Christianity come to their rescue. The children added much to the interest of the day, by preparing flags with such mottoes as the following: "What a blessing the gospel is!" "The Christians of England sent us the gospel." "Had it not been for the gospel, we should have been destroyed as soon as we were born." On some, texts of Scripture were inscribed: "Behold the Lamb of God which taketh away the sin of the world." "Suffer little children to come unto me," and other similar passages. Insensible, indeed, must he have been who could have witnessed such a scene without the liveliest feelings of delight. After proceeding through the settlement, they were conducted to the spacious chapel, and opened the service by singing the jubilee hymn in the native language. The venerable old king then took the chair. He had been worshipped as a god, and had led fierce warriors to the "battle and the fight," but he evidently felt that he had never occupied a station so delightful or honourable as that of presiding at the examination of the child-

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ren of his people. These were placed in the centre of the chapel, and the parents occupied the outer seats. Each class was then called up and examined, and, after this, individuals from the different classes were selected and questioned by the missionary. While this was proceeding, the appearance of the parents was most affecting. The eyes of some were gleaming with delight, as the father said to the mother, or the mother to the father, "What a mercy it is that we spared our dear girl!" Others, with saddened countenances, and faltering voices, lamented in bitterness that they had not saved theirs; and the silent tear, as it stole down the cheeks of many, told the painful tale that *all* their children were destroyed. In the midst of our proceedings, a venerable chieftain, grey with age, arose, and with impassioned look and manner, exclaimed, "Let me speak; I must speak!" On obtaining permission, he thus proceeded, "Oh that I had known that the gospel was coming! oh that I had known that these blessings were in store for us! then I should have saved my children, and they would have been among this happy group, repeating these precious truths; but, alas! I destroyed them all, I have not *one* left." Turning to the chairman, who was also a relative, he stretched out his arm, and exclaimed, "You, my brother, saw me kill child after child, but you never seized this murderous hand, and said, 'Stay, brother, God is about to bless us; the gospel of salvation is coming to our shores.'" Then he cursed the gods which they formerly worshipped, and added, "It was you that infused this savage disposition into us, and now I shall die childless, although I have been the father of *nineteen* children." After this he sat down, and in a flood of tears, gave vent to his agonized feelings.

This scene occurred in my own place of worship. I saw the man, and heard him utter these expressions. I shall leave the fact to speak for itself. Many other instances, equally affecting, might be added, but I shall content myself with mentioning but one more. This related to a chief woman, who had been united in marriage to a man of inferior rank; and it was the universal custom to destroy the children of such an union. The first babe was born and put to death. The father wished the second to be spared; but the mother, and the mother's relatives, demanded its destruction. The third was a fine girl. The father pleaded and entreated that it might be saved, for his bowels yearned over it; but the mother, and the mother's relatives, again carried their point, and the babe was doomed to die. One of the numerous modes of infanticide was, to put the babe in a hole, covered with a plank, to keep the earth from pressing it, and to leave it there to perish. This method was adopted in the present instance. The father happened to be in the mountains at the time of the child's birth and interment; but, on his return, he hastened to the spot, opened the grave, and finding that the babe was not dead, he took her up, and gave her in charge to his brother and sister, by whom she was conveyed to the island of Aimeo, about seventy miles distant, where they trained her up. The husband died, without having informed his wife that their daughter was still alive. After Christianity was embraced, the mother was, on one occasion, bewailing most bitterly the destruction of her children, when a woman, who happened to be present, and who was acquainted with the fact of the child's disinterment, astonished and overwhelmed her with the announcement that her daughter had been saved, and was yet living at Aimeo. A short time after receiving this extraordinary intelligence, she sailed to Aimeo, and, on reaching the shore, hurried with excited feelings to the house of her relatives, and, as she approached it, beheld with wonder and delight a fine young girl standing in the doorway. At once she recognised her own image in the countenance of the child. It was her daughter. She clasped her to her bosom—but I must leave imagination to fill up the scene, as she exclaimed, "Rejoice with me; for this my daughter was dead and is alive again." The mother is gone to her rest, but her daughter is, at the present time, an active teacher in our schools, and a consistent member of a Christian church!

The reasons assigned for this inhuman practice afford an affecting comment upon that passage, "The dark places of the earth are full of the habitations of cruelty." The first cause alleged was their wars. These were so frequent, sudden, and desolating, that mothers

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have often told me, that to avoid the horrors and distress thus entailed on those who had families, they destroyed many of their children.

A second cause, as we have already intimated, was inequality of station. If a woman of rank was united to a man of inferior grade, the destruction of two, four, or six infants, was required to raise him to an equality with her; and when this had been effected, the succeeding children were spared.

A third reason adduced for the practice was, that nursing impaired the personal attractions of the mother, and curtailed the period during which her beauty would continue to bloom.

We had a servant in our employ for fifteen years, who previously practised infanticide as her trade; and we have many times listened with feelings of the deepest agony while she has described the manner in which she perpetrated the horrid deed.

What a truly affecting picture do these facts exhibit of human nature, where the light of Divine truth has not beamed upon its darkness, where the religion of the gospel has not exercised its benign influence! They show that the sun may shine for ages, with all his boundless munificence, and yet fail to kindle in man a spirit of benevolence; that the earth may pour forth her abundance, and not teach man kindness; that the brute creation, impelled only by instinct, may exhibit parental fondness, and man fail to learn the lesson. By no species of ingenuity could we instruct the beasts of the field thus barbarously to destroy their young. Even the ferocious tiger prowls the forest for their support, and the savage bear will fearlessly meet death in their defence. But the facts now stated are only in harmony with innumerable others, which prove that, in every place, and under all circumstances, men need the gospel. Whether you find them upon the pinnacle of civilization, or in the vortex of barbarism; inhabiting the densely populated cities of the east, or roaming the wilds of an African wilderness; whether on the wide continent, or the fertile islands of the sea; surrounded by the icy barriers of the poles, or basking beneath a tropical sun; all need the gospel; and nothing but the gospel can elevate them from the degradation into which they have been sunk by superstition and sin. You may introduce among them the arts and sciences, and by these means refine their taste, and extend the sphere of their intellectual vision; you may convey to them our unrivalled constitution, modified and adapted to their peculiar circumstances, and thus throw a stronger safeguard around their persons and property, and elevate them from a barbarous state of vassalage to the dignity and happiness of a free people; but if you withhold the gospel, you leave them still under the dominion of a demoralizing and sanguinary superstition, aliens from God, and ignorant of the great scheme of redemption through his Son.

Let science, then, go with her discoveries, and philosophy with her wisdom, and law with her equitable sanctions and social benefits, and let them exert their united influence to bless and elevate our degraded world; but let it be the honour and ambition of the Christian to convey that glorious gospel, by which alone the regeneration and happiness of mankind can be fully and permanently secured.—*Rev. John Williams.*

THE FOURTH DAY'S CREATION.

The work of the fourth day was a great operation on the whole frame of things. On this day the heavenly bodies, already rolling on their axes, were to be impressed with the new form of motion which rolls them round the centres of their systems. The globe had already been divided into land and ocean; the land was already clothed with vegetation; the air was formed, tempering the heat and cold of the soil, receiving the vapours, and returning them, softened and purified, into its bosom. To the earth, thus prepared for the course by which it administers to the subsistence and pleasures of man, in this fitting moment, *the seasons*, by which this course was to be thenceforth sustained, were determined. Of all the acts of the Divine hand, next to the first summoning of the universe into existence, this was the most stupendous. Imagination totally sinks before the attempt to conceive the terrific sublimity of this display, even within the boundaries of the solar system, seen in its true velocities and magnitudes—twenty-nine orbs from 2000 to 80,000 miles in diameter, suddenly shooting forth into space, with a speed of from 20,000 to 100,000 miles an hour; and even those velocities slow to the

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flight of a new host, the flame-bearers of the system, the five hundred, or the five thousand comets, sweeping columns of fire, from fifty to a hundred millions of miles long, through the heavens; crossing and traversing the planetary paths in every form of orbit, plunging on them straight downward, sweeping side by side, cutting through them at every conceivable inclination; in all threatening them with ruin, yet darting through this infinite intricacy with a smoothness and safety which have never been impaired during six thousand years.

Yet what is our system compared with the universe! The whole creation is in movement: the higher the telescope penetrates, the more clearly it discovers, that all its orbs alike are speeding through space; that suns and their systems are rolling round orbits of indescribable magnitude, the satellites of suns and systems, vaster still, each sweeping a broader inroad into the kingdom of vacancy, all guided by one law, all sustained, animated, and governed by one transcendant will. And this was but the work of a word, the fabric of things to pass away, but "the hiding of His power."

But, in all instances of the Divine agency in nature, the finer contemplation is their science. The characteristics which so powerfully strike the senses are comparatively lost in the measureless field, which their construction opens to the understanding. The laws by which the motions of our system are regulated, their exact and undeviating proportions, their periodic provisions against excess of error, form the true sublime. Yet we may be still but in the outskirts of this knowledge. The investigations of those few years have led us to the gates of a new empire of celestial discovery. A slight change in the telescope, or some of those sudden sparks of illumination which the world calls accident, but which should more fitly be named direct interpositions of Providence to stimulate and guide the progress of man, may soon advance us further still, and open, not simply the view, but the constitution, of the new host of heaven. The Binary and clustered stars, with their gigantic revolutions of thousands of years; the regions of the Nebulæ; those still more prodigious globes of constellations, of which we know nothing but that they contain countless millions; those vast insulated stars, pre-eminent by their magnitude and the intense beauty of their golden, purple, emerald, and crimson splendours, perhaps offering new delight to new powers of vision in other worlds, and showing the universe to their inhabitants in shapes and lustres more magnificent than are conceivable by human eyes; glorious, even as "one star excelleth another star in glory."—*Croly.*

THE IRISH LANGUAGE.

One reason for the attachment of the Irish to their own language may be found in the fact of its being their mother tongue. This is a feeling not confined to Ireland: it extends to all mankind. The Irish language possesses, however, some touching peculiarities of structure and of idiom. It has a soul of poetry within it, which exercises a most magical power over the associated affections. This power of the Irish language, to which I refer, may be intelligibly and beautifully exemplified in its ordinary expression of kindness. I can myself bear testimony to the practical kindness of England. I have now, for the last five or six weeks, been visiting various parts of this country, on the business of several societies in Ireland; and I must say, that I was every where received with such a kind and hospitable welcome as I can never forget. Yet the English language, in its ordinary forms, would merely express a welcome. How much more spirit-stirring must be the native Irish greeting, "A hundred thousand welcomes await you!" This, to be sure, might sound like something of hyperbole; but it nevertheless, in the meaning attached to it, and in the manner in which it is generally delivered, has an influence on the Irishman's heart, which the colder English can never convey. I could cite many instances of such poetical structure and effect in the ordinary colloquial Irish; but I will confine myself to one more. An English mother conveys the full tide of her fondness, when she calls her child her "little dear;" but how far does this expression fall short of the address of an Irish mother to hers? She calls it "the vein—the pulse—the beating voice of my heart." Any one can admire the expression—a mother only can feel it. The Irish is, indeed, the language of feeling; for the people are a people of feeling. On this stock both their virtues and their vices grow. Let England employ the Irish language

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to improve and cultivate Irish principle, and she will yet reap a harvest of peace and blessings from a grateful and fruitful soil.—*Dr. Cooke.*

INFLUENCE OF CURRENTS AND DRIFT ICE ON TEMPERATURE.

Among other influential causes, both of remarkable diversity in the mean annual heat, and of unequal diversity of heat in the different seasons, are the direction of currents, and the accumulation and drifting of ice in high latitudes. The temperature of the Lagullas current is ten or twelve degrees Fahr. above that of the sea at the Cape of Good Hope; for the greater part of its waters flow through the Mozambique channel, down the south-east coast of Africa, and are derived from regions in the Indian Ocean much nearer the line and much hotter than the Cape. An opposite effect is produced by the "equatorial" current, which crosses the Atlantic, from Africa to Brazil, having a breadth, varying from one hundred and sixty to four hundred and fifty nautical miles. Its waters are cooler by three or four degrees Fahr. than those of the ocean under the line, so that it moderates the heat of the tropics.

But the effects of the Gulf stream on the climate of the north Atlantic Ocean are far more remarkable. This most powerful of known currents has its source in the Gulf or sea of Mexico, which, like the Mediterranean and other close seas, in temperate or low latitudes, is warmer than the open ocean in the same parallels. The temperature of the Mexico sea in summer is, according to Rennell, eighty-six degrees Fahr., or, at least, seven degrees above that of the Atlantic in the same latitude. From this great reservoir, or caldron of warm water, a constant current pours forth through the Straits of Bahama, at the rate of three or four miles an hour; it crosses the ocean in a north-easterly direction, skirting the great bank of Newfoundland, where it still retains a temperature of eight degrees above that of the surrounding sea. It reaches the Azores in about seventy-eight days, after flowing nearly three hundred geographical miles, and from thence it sometimes extends its course a thousand miles further, so as to reach the Bay of Biscay, still retaining an excess of five degrees above the mean temperature of that sea. As it has been known to arrive there in the months of November and January, it may tend greatly to moderate the cold of winter in countries on the west of Europe.

There is a large tract in the centre of the north Atlantic, between the parallels of thirty-three and thirty-five degrees north latitude, which Rennell calls the "recipient of the Gulf water." A great part of it is covered by the weed called sargasso, which the current floats in abundance from the Gulf of Mexico. This mass of water is nearly stagnant, is warmer by seven or ten degrees than the waters of the Atlantic, and may be compared to the fresh water of a river overflowing the heavier salt water of the sea. Rennell estimates the area of the "recipient," together with that covered by the main current, as being two thousand miles in length from east to west, and three hundred and fifty in breadth from north to south, which he remarks is a larger area than that of the Mediterranean. The heat of this great body of water is kept up by the incessant and quick arrival of fresh supplies of warm water from the south; and there can be no doubt that the general climate of parts of Europe and America is materially affected by this cause.

It is considered probable, by Scoresby, that the influence of the Gulf stream extends even to the sea near Spitzbergen, where its waters may pass under those of melted ice; for it has been found that in the neighbourhood of Spitzbergen, the water is warmer by six or seven degrees at the depth of one hundred and two fathoms, than at the surface. This might arise from the known law, that fresh water passes the point of greatest density when cooled down below forty, and between that and the freezing point expands again. The water of melted ice might be lighter, both as being fresh, (having lost its salt in the decomposing process of freezing,) and because its temperature is nearer the freezing point than the inferior water of the Gulf stream.

The great glaciers generated in the valleys of Spitzbergen, in seventy-nine degrees of north latitude, are almost all cut off at the beach, being melted by the feeble remnant of heat still retained by the Gulf stream. In Baffin's Bay, on the contrary, on the west coast of Old Greenland, where the temperature of the sea is not mitigated by the same cause, and where there is no warmer under-current, the glaciers stretch out from the shore,

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and furnish repeated crops of mountainous masses of ice, which float off into the ocean. The number and dimensions of these bergs is prodigious. Captain Ross saw several of them together in Baffin's Bay aground, in water fifteen hundred feet deep. Many of them are driven down into Hudson's Bay, and accumulating, these diffuse excessive cold over the neighbouring continent. So that Captain Franklin reports, that at the mouth of Hayes River, which lies in the same latitude as the north of Prussia or the south of Scotland, ice is found every where, in digging wells in summer, at the depth of four feet. Other bergs have been occasionally met with, at midsummer, in a state of rapid thaw, as far south as latitude forty degrees, and longitude about sixty degrees west, where they cool the water sensibly to the distance of forty or fifty miles round, the thermometer sinking sometimes seventeen, or even eighteen degrees, in their neighbourhood. It is a well known fact, that every four or five years a large number of ice-bergs, floating from Greenland, double Cape Langaness, and are stranded on the west coast of Iceland. The inhabitants are then aware that their crops will fail in consequence of fogs, which are generated almost incessantly, and the dearth of food is not confined to the land; for the temperature of the water is so changed that the fish entirely desert the coast.—*Dr. Lyell.*

KNOWLEDGE OF CHRIST.

Here is the privilege of the knowledge of Christ Jesus, that as it is of eminence and height, so it is of use and convenience, and that in the highest measure; as it is a pearl for beauty, so it is for value. This knowledge is a kind of catholicon, of universal use and convenience. It is so in reference to this life. Am I in want, in contempt, in prison, in banishment, in sickness, in death? This knowledge gives me contentedness, patience, cheerfulness, resignation of myself to His will who hath sealed my peace with him, and favour from him, in the great covenant of his Son; and I can live upon this, though I were ready to starve. I am assured that if it be for my good and the glory of His name, I shall be delivered; if not, I can be contented, so that my jewel, the peace of God, and my own conscience by the blood of Christ, be safe. Am I in wealth, honour, power, greatness, esteem in the world? This knowledge teacheth me humility, as knowing from whom I received it; fidelity, as knowing to whom I must account for it; watchfulness, as knowing that the honour of my Lord is concerned in some measure in my conduct; and that the higher the employment is, the more obnoxious I am to temptation from without, from them that watch for my halting, and from within by a deceitful heart. And in all it teacheth me not to over-value my condition; nor to value myself the more by it or for it, because the knowledge of Christ Jesus presents me with an object of a higher value, the prize of the high calling of God in Christ. It teacheth me to look upon the glory of the world as rust, in comparison of the glory that excelleth, and that the greatest of men is a worm in comparison with the great God. And as thus in reference to the temporal condition of my life, this knowledge of Christ is of singular use, and makes a man a better philosopher than the best system of morals, in reference thereunto; so it guides me in the management of all relations. 1. To God; presenting him unto me as full of majesty, yet full of love, which teacheth me reverence and yet access with boldness, love, and obedience. 2. To man; enjoining justice, which is giving every man his due; mercy, to forgive; compassion, to pity; liberality, to relieve; sobriety, in the use of creatures, and yet comfort in the enjoying of them; a right use of the world, and yet a contempt of it in comparison of my hope. It makes death not terrible, because a most sure passage to life. I find a way to get all my sins pardoned, whereas, without this all the world cannot contrive a satisfaction for one; I find a way to obtain such a righteousness as is valuable with God, and perfect before him, even the righteousness of God in Christ. And here I find the means, and only means, to avoid the wrath to come, the terror of the judgment of the great day, and to secure everlasting life unto all eternity with the blessed God and our Lord Jesus Christ, and all the blessed angels, and the spirits of just men made perfect. Thus this knowledge is useful for this life, and that which is to come, and that in the highest degree, which all other knowledge comes short of, and attains not to any one of the least of these ends.—*Hale.*

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MAY FLOWERS AND PLANTS.

Plants in Blossom.

WILD.	CULTIVATED.
Gloryless, *Adoxa moschatellina*	Monkshood, *Aconitum Napellus*
Bugle, *Ajuga reptans*	Columbine, *Aquilegia vulgaris*
Wood wind-flower, *Anemone nemorosa*	Sweet woodroof, *Asperula odorata*
Field daisy, *Bellis perennis*	Yellow asphodel, *Asphodelus luteus*
Marsh marigold, *Caltha palustris*	Crimson cranesbill, *Geranium sanguineum*
Lady's smock, *Cardamine pratensis*	German flag, *Iris Germanica*
Lily of the valley, *Convallaria majalis*	Poet's lily, *Narcissus poeticus*
Hawthorn, *Cratægus oxycantha*	Star of Bethlehem, *Ornithogalum umbellatum*
Field rush, *Luzula campestris*	Peony, *Pæonia vulgaris*
Carmyle, *Orobus tuberosus*	Cambrian poppy, *Papaver Cambricum*
Wood sorrel, *Oxalis acetosella*	Common syringa, *Philadelphus coronarius*
Buttercup, *Ranunculus acris*	Laurel rose, *Rhododendron Ponticum*
White Saxifrage, *Saxifraga granulata*	London Pride, *Saxifraga Umbrosa*
Blue-bell, *Scilla non scriptus*	Tulip, *Tulipa Gesneriana*
Cowslip, *Primula veris*	Heart's-ease, *Viola amœna*
Oxlip, *Primula elatior*	
Primrose, *Primula vulgaris*	

MAY is peculiarly the month of flowers; and hence Milton personifies it as the "flowery May," in his exquisite lines on *May Morning*:—

"See the bright morning star, day's harbinger,
Comes dancing from the east, and leads with her
The flowery May, who from her green lap throws
The yellow cowslip, and the pale primrose."

The woods, the fields, and the gardens, vie with one another in the gay colours and the sweet odours which they diffuse through the air; "for," in the inspired words of Solomon, "lo, the winter is past; the rain is over and gone; the flowers appear on the earth; the time of the singing of birds is come; and the voice of the turtle is heard in our land."

If we "go forth to the fields," we see them adorned with golden buttercups, and "crimson tipped" daisies, and lady-smocks, "all silver white." There are two species of butter-cups, both very common in our fields and pastures, which though very distinct, can only be discriminated readily by a botanist; for common observers seldom perceive the distinction. The most common of the two, in the pastures near London, and near the sea coasts of Scotland, is the bulbous-rooted, (*Ranunculus bulbosus*,) at once recognized by digging up the plant, which has a bulbous root somewhat like a leek, or a small onion, while the acrid species, *R. acris*, has a fibrous root, without any bulging. But without digging up the plants, the two sorts may be instantly distinguished by the cup, (*calyx*,) which supports or stands under the yellow leaves or petals of the blossom; this cup, having its five leaves upright, or nearly so, in the acrid sort, and bent downwards in the bulbous species.

Besides these two, there are several other species, not unlike them in the flowers, but distinguished by other peculiarities, such as the creeping sort, *R. repens*, which has large dark-green leaves and creeping roots, the spearwort, *R. flammula*, with long leaves, and the galdilocks, *R. auricoma*, which is slender in form, and grows in woods and lanes. All the species are more or less poisonous; but though children so frequently gather the flowers, few, if any accidents occur from their poisonous qualities; for their acrid, disagreeable taste prevents them from being eaten. It is a common, but most erroneous opinion, that the fine yellow colour of butter at this season, is owing to the cows feeding upon the butter-cups in the pastures, and hence the name of butter-cup; though the slightest observation must convince us, that cows never touch these plants, but will, on the contrary, carefully avoid them. If we consider the

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probable intention of Providence in rendering these poisonous plants so common, we infer, that it may be to afford protection to the grasses and other herbage eaten by cattle; for, were the whole green sward of the field composed of nothing besides grass, it might be eaten so bare as to destroy the roots, and produce a serious scarcity of forage; whereas, by the poisonous butter-cups being so much mingled with the grass, the cattle are prevented from grubbing up the latter to so great an extent as to injure its subsequent productiveness as the season advances. This is a very interesting view of the economy of Divine Providence, and might be illustrated from many other facts of a similar kind. The field daisy, *Bellis perennis*, is not quite so conspicuous as the butter-cup, though in some pastures it is so very abundant as to render the whole turf gay with its pretty blossoms. In such cases, it looks very beautiful in a lawn, or front of a villa, or cottage ornée; but it is not easy to persuade a regularly bred gardener of this: and, unless the proprietor looks to it, and gives orders accordingly, the gardener will extirpate every daisy from the lawn, with an instrument invented peculiarly for this purpose, called a daisy extractor. The reason of the hostility of gardeners to the daisy is, that though during this month and part of the next it tends to beautify the turf, no sooner does the weather set in dry and warm, than the flowers not only disappear, but the leaves decay, and leave the turf meagrely covered with green; the bare ground showing in patches where the daisies had previously spread their leaves. This does not take place so much in moist, cold seasons, when daisies thrive best; for they are so impatient of heat, and particularly of drought, that they will not grow in climates such as that of Australia, or the Cape of Good Hope, where these prevail. There is only one species of daisy, which in the field varies from pure white to deep crimson. The double varieties in the garden are also of the same botanical species with the field daisy.

The blossom of the daisy is one of those which botanists called compound, or, more properly, aggregate flowers, *Syngenesia*, each blossom being composed of between two and three hundred other flowers or florets, all of them perfect, that is, having each its corolla, germ, pistil or style, stamens, and seed, as described before, *Visitor*, vol. III. pp. 52—114; and as complete therefore as a lily or a hyacinth. Each of the flower leaves, usually white above and crimson underneath, forming a kind of circular coronet around the flower, though they appear to be no more than little petals, are in reality complete flowers, as well as each of the small yellow things within this coronal circle, which a young botanist might mistake for stamens. When a little experience has been acquired with the aid of a good microscope, and patience to examine this, the truth of our account may be easily made manifest. For example, if the young botanist pull out one of the white coronal flowers from the circumference of the circle, he will at first think that it is flat from one end to the other; though on looking carefully at the end by which it was fastened into the rim of the disk, he may perceive, that it is not flat, but round and hollow, in form of a tube, while a little thread, ending in a curved fork, like two horns, arises out of the tube. This is the pistil or style of the floret, which is only flat at its outer extremity; and the same holds true of each of the white flower leaves all round the coronal circle.

Let him next examine the central or yellow part of the disk, which rises in a sort of cone within the circle of white florets, and, if the blossom be sufficiently advanced, he will see each of the yellow florets open in the middle, and cut into several parts, which, when examined by means of a microscope or a small pocket magnifying glass, will exhibit a pistil or style surrounded with anthers, not unlike in form to the larger flowers of the hyacinth or the lily of the valley. When the yellow florets of the centre of the disk are closed at top with a round smooth bulging, they are not yet expanded, and may be considered as similar to flower buds. They begin to expand successively from the circumference towards the centre.

If we go from the fields to the woods and copses, we find a similar profusion of flowers, though these are not quite so showy and conspicuous as butter-cups. Among these the primrose, the wood wind-flower, and the blue-bell, are the most common; and as these grow more usually in broad patches than in a dispersed manner, they are more likely to attract notice.

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The primrose, *Primula vulgaris*, is a a great and general favourite, deriving its name from its early flowering; for though this is the month when it is in its greatest beauty, occasional plants may be found in flower from Michaelmas and throughout the winter. The primrose varies in colour, from the common pale sulphur yellow to white, on the one hand, and to bright yellow and purple on the other. But the most remarkable variation is in the part called by botanists the *scape*, or general flower stalk. In the common varieties in the woods, the scape is too short to be seen, and hence the individual flowers appear to rise from the bosom of the leaves; yet there always is a scape, how inconsiderable soever it may seem. In the cultivated varieties of the garden, on the other hand, the scape may be observed in many diversities of length, from the eighth part of an inch, to four, six, or eight inches. The purple, and other coloured varieties, when the scape rises to the height of a few inches, bearing on its summit from five to seven or nine flowers, are well-known under the name of "Polyanthus," which is the Greek for "many-flower," though this is not, as might be supposed, a distinct species, being nothing more than a variety of the common primrose.

The blue bell, *Scilla non-scriptus*, is as much distinguished by its fine odour (rather too powerful in a nosegay) as for its beautiful blue colour, and the graceful drooping of the flower spike. There is a variety with white flowers, but this is by no means common. This flower was formerly placed by botanists with the hyacinths, but is now more correctly transferred to the squills, and, like the squill, used in medicine: the root is rather of a poisonous nature, though it is by no means a violent poison.

The wood wind-flower, *Anemone nemorosa*, is a very common and very pretty flower, usually white, with a tinge of red or rose colour on the petals. It has similar acrid qualities to the buttercup, and would prove poisonous if introduced into the stomach, though no accident of this kind has, so far as we know, been recorded by medical writers.

In the hedges, the hawthorn, or Maybush, *Cratægus oxycantha*, beautifies every lane, and diffuses through the air its

"Fragrance, exquisite
As new-mown hay."

The varieties of this useful and ornamental native tree are not very numerous, but some of them are so much admired as to be propagated by grafting; particularly the Glastonbury thorn, fabulously reported to have originally sprung from the staff of Joseph of Arimathea, and sometimes blowing as early as Christmas. But the most admired of these varieties is the rose coloured one, a very beautiful sort, accidentally discovered a few years ago in a hedge near Perth, in Scotland. The common red variety is very inferior in beauty to this one. There is also a double white variety, occasionally seen in the shrubberies of the curious.

The lilac, *Syringa vulgaris*, which takes its name from the Persian word for "flower," is now one of the finest ornaments of the shrubbery. Its varieties are beautifully described in the *Task* as

"Various in array, now white,
Now sanguine, and her beauteous head now set
With purple spikes pyramidal; as if
Studious of ornament, yet unresolved
Which hues she most approved, she chose them all."
COWPER.

There are several species of the lilac, of which the Persian and the Chinese are the best known, particularly the first.

Among the more conspicuous flowers in the garden during this month, we may mention the tulip, the poet's lily, and the peony. Some have supposed that the tulip may be the lily alluded to by our Saviour, in the passage, "Consider the lilies of the field, for they toil not, neither do they spin, yet Solomon in all his glory was not arrayed like one of these;" the tulip growing wild in the Holy Land. Be this as it may, the words will apply to the tulip as strongly, at least, as to any other flower, when we take the exquisite variety of the colours into consideration. The passion, or rather mania, which this flower has created, is so very extraordinary as to be unmatched in the annals of the world. For example, we are told, that at Alcmaer, about twenty-three miles from Amsterdam, there were sold publicly by auction, in the year 1637, one hundred and twenty tulips for 90,000 guilders, equal to £8437 10*s*. One of those flowers, with its roots and offsets, called the Admiral Enchuysen, was sold for 5200 guilders, equal to £487 10*s*. Two others, called Brabanters, for 3800, equal to £356 5*s*. One, named the Viceroy, sold for 4203, equal to £394 0*s*. 7½*d*. About the middle of

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the seventeenth century, the variety termed Semper Augustus, was sold for 4600 florins, together with a new carriage and a pair of horses, with harness complete, the whole of which could not be less than £600. On another occasion, a plant, supposed to be the same variety, sold for twelve acres of good freehold land. Not only the names and prices of these flowers, but the weights of the bulbs, were carefully entered in the municipal register of Alcmaer; but this was, in some respects, a nominal value, connected with a sort of dealing, very like stock-jobbing. J. R.

WINTER SCENES.

In our climate, and in all the regions which verge toward the poles, within certain limits, one of the discomforts of winter, which must occur to every person who thinks on the subject, is the shortness and gloom of the day. The sun rises late, looks down for a few hours with diminished glory on a blasted world, and then goes rapidly away, leaving all nature in darkness. Yet see how it is rendered a source of pleasure and improvement! If, during the absence of the sun, we look at the starry heavens, what an inexhaustible fund of wonders does astronomy unfold, at once to exalt and to humble the human mind; to fill us with admiration of the Divine perfections, and to teach us the salutary lesson of our own insignificance. It does not require that we should dive into the mysteries of the heavens, by means of the telescope, before these sentiments arise. They belong to every age of the world, and to every station in life. There is no expression of devotional feeling to which even "babes and sucklings," as it is emphatically said, more readily respond, than that of the psalmist, "When I consider thy heavens, the work of thy fingers, the moon and the stars which thou hast ordained, what is man, that thou art mindful of him? and the son of man that thou visitest him?"

Look, again, at the comforts and domestic endearments of a winter evening fire-side. Who, that has experienced these, will allege that winter is inferior to summer, either in its enjoyments or in its means of improvement? When early night has spread its deep shade over external nature, and labour has ceased in the fields, and the sound of busy feet is more rarely heard along the streets; when the shutters are closed, and the curtains drawn, and the fire blazes in the grate, and the candle stands on the table, shedding artificial day, and an united family, shutting out the world, retire within their own beloved circle, to enjoy the social hours; when the father and mother occupy their wonted chimney corners, and the children, while their hands, perchance, are engaged in some light employment, listen with interest to the instruction of some well chosen book, or bear their parts in edifying and endearing conversation; who will not confess that there are advantages in this intercourse, which longer days, and a more genial atmosphere, with all the attractions of vocal woods and flowery meads, can scarcely equal?

Here, then, we have compensation for an acknowledged evil: we have even more. This evil is converted into means of pleasure and improvement; and such is precisely the character of creative wisdom and goodness, into which we have to inquire. He who expects to find a higher grade of perfection in those manifestations of nature with which he is surrounded, will assuredly be disappointed.

Yet this is a state of things far from being satisfactory to the inquiring mind; and the question still recurs, Whence is this seeming contrariety and defect? Why does evil exist at all, under the government of an all-wise and all-powerful Providence? Again, and above all, Whence is moral evil? How comes it, that ingratitude to a Benefactor of infinite perfection, and rebellion against the eternal laws of the great Moral Governor, should exist for a single instant, and should be permitted to brave, as it were, the majesty of the Eternal?

These are questions too deep for human reason; at the bare statement of which, indeed, human nature stands aghast and confounded. But Revelation takes up the important subject, and utters its response. The world came from its Creator an image of his own perfections; but it has been smitten with a curse. The chief of the Creator's sublunary works; he for whose abode the earth was prepared, and clothed in beauty, who was made but a little lower than the angels, and bore upon his breast the impress of his Maker; that lord of this nether

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sphere, received the precious gift of liberty, but abusing it, converted it into the means of his own miserable degradation. His destiny was altered, and the world in which he was for a season to dwell was altered also. To fallen man, the earth was no longer to be a place of rest, but of pilgrimage; from a paradise of enjoyment, it has been converted into a school of discipline. That heavenly blessing which had filled the earth, the sea, and the air, with beauty and happiness, was withdrawn. Darkness and tempest, change and decay, were thenceforth to brood over inanimate nature; want, suffering, and death, were to invade the living creation; and the guilty author of this universal blight was himself to be blighted more than all!

But why? Not that this intelligent creature should exist a few unhappy years in a stricken world, and then perish for ever; but that, under the chastisement of a Father's rod, he might learn wisdom; and, becoming the object of Divine mercy, might, by means of labours not his own, aspire to honours greater than those he had forfeited, and be made an heir of immortality in a higher and brighter world.—*Duncan.*

SEEING WITHOUT OBSERVING.

NOTHING is more common than the want of wise and proper observation. The objects and events adapted to excite it, and which would also reward it, are various and numberless. And some of them daily and hourly strike our senses, yet they engage none of our notice and attention as rational and moral beings. From an immense multitude, let us select two of these occurrences by way of example; the birth and the death of our fellow-creatures.

How little attention is excited by the birth of a child. It may, perhaps, if it takes place in respectable life, be announced in the paper; inquiries may be made concerning its sex and form; it may be viewed and embraced by the friends who call ceremoniously on the mother. But what moral or religious reflection is ever indulged by those who are informed of the event, or even by the parents themselves? The interesting sufferer herself may be pleased with the congratulations paid her, and forget her anguish for joy that a man is born into the world, and feel a lively gratitude for the mercy she has experienced; but no one thought may arise in the mind respecting the all-important result in the production of a new being, and such a being too! Yet the birth of a child can scarcely be deemed less than a miracle of nature and Providence. That child is a piece of Divine workmanship, fearfully and wonderfully made, and as fearfully and wonderfully preserved and endowed. When the Creator made it, he did a far greater thing than when he made the sun. The sun is a mass of unintelligent matter. It sees not its own light. It feels not its own heat, and is not destined to shine and burn for ever. But there is a spirit in that child, and the inspiration of the Almighty giveth him understanding. He is a moral being. He is the subject of reason and science. These principles are not yet developed, but they are lodged in him. They are in him as the flower is in the seed, and the oak in the acorn. He is an heir of immortality; and though his existence began yesterday, it will never never end. He will hear the heavens pass away with a great noise, and see the elements melt with fervent heat. He will stand before the judgment-seat of Christ, and go away into everlasting punishment, or into life eternal.

He is also to be viewed relatively as well as personally. And what an awful interest does he acquire from the evil he may occasion, as well as suffer! and from the good he may produce as well as experience! He may prove a viper in the bosom that feeds him, a disgrace to his family, a curse to the nation. Many may be vitiated by his example, and led into hell by his influence. "One sinner destroyeth much good." Or he may make a glad father, and prove a blessing to the neighbourhood, and serve his generation by the will of God, and levy a tax of gratitude on future ages. Who that had seen Isaac Watts in the arms of his mother, sitting at the door of the prison in which his father was suffering for conscience' sake, could have divined that this precious babe was the sweet psalmist of the Christian church, and that the little hand that stroked her cheek was destined to hold the pen that should instruct and edify the world to the end of time? Had we heard when the babe wept, and looked into the ark of bulrushes, we should have seen the scholar learned in

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all the wisdom of Egypt, the scourge of Pharaoh, the deliverer of the Hebrews, the king in Jeshurun, the lawgiver and prophet of the Lord, with whom he spake face to face. What says the Lord of all? "Despise not one of these little ones; for I say unto you, That in heaven their angels do always behold the face of my Father which is in heaven."

Let us pass to the second article—death. This is perpetually taking place around us: yet how little it is noticed, was long ago remarked by Eliphaz, "They are destroyed from morning to evening: they perish for ever without any regarding it." This indifference is one of the most astonishing things in a world of wonders, especially when taken in connexion with those consequences that in general belief are supposed to result from it. If a tower fell, if a mountain was swallowed up by an earthquake, we should notice and make it the subject of conversation for days and weeks. Yet what is this compared with the removal of a fellow-creature, detached from all visible nature, excluded from every thing that once pleased or engaged him below the sun, severed from all his endeared connexions, his flesh seeing corruption, while his soul has entered into an entirely new state of existence, in immediate and perceptible communion with the Lord of all! Death is the most serious and momentous event that can befal the children of men. For it is not the extinction of being, but only the termination of one mode of it, and the commencement of another; the transition from time to eternity, from a course of action to the sentence of retribution. When the dust returns to the dust, whence it was, the spirit returns to God who gave it; and then the Divine fiat runs, "He that is unjust, let him be unjust still; and he which is filthy, let him be filthy still; and he that is righteous, let him be righteous still; and he that is holy, let him be holy still."

And yet who considers it? When the bell tolls, we hardly ask whose doom it announces. When we see a funeral in the street, we scarcely look towards it, unless it be accompanied by the pomp of mortality. We see new names on the doors of the houses, but we pass without thinking that the places which once knew the owners know them no more for ever. A neighbour dies, and from civility we attend the burial and lend him our last assistance, but return into the busy or trifling concerns of life as careless as before. Death enters our own dwelling; we feel deeply, but we reflect slightly. We mourn our loss, but the heart is not made bitter; we miss them for a time, but we soon furnish substitutes, or grow insensible to the want of them. When every duty the utmost decorum can exact, or the most perfect affection dictates, is discharged towards the deceased, where is the concern of the living to derive from the decease itself the spiritual profit which it is designed to yield? Where is the earnestness of the prayer, "So teach us to number our days, that we may apply our hearts unto wisdom."

HUMAN LIFE.

On no subject are men more universally agreed, than on the instability of human life. Every object in nature, remarkable for its fleeting existence, has been used as an emblem of it, and it has been compared to the withering grass, the perishing flower, and the passing vapour. It might be supposed that where opinion is so unanimous, the conduct resulting from it would be no less so; that where all men are agreed in theory, something like uniformity would be found in practice. But exactly the reverse is the case. Many who are ready enough to utter common place observations on mortality, are far from being anxious to live for immortality; many will moralize on death, who live as if their earthly existence was to experience no end. "Man goeth to his long home, and the mourners go about the streets;" the sight is witnessed by many, a momentary feeling is perhaps excited: "Ah! who knows who may be next!" may be exclaimed, and the spectators pass on to act, and think, and speak, as if they were to be the last on whom death would fix his dart; while the pompous parade of grief, which the rich exhibit, excites but an idle curiosity, or a passing remark, as to the non-exemption of rank and power from the common lot of man.

But surely to creatures, whose existence in this world is but a preparation for a future state, whose condition in that state will be decided by their conduct here; the examples of dissolution which continually occur around us, the knowledge of the uncertainty of life, and the certainty of a speedy termination to our

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mortal career, should excite feelings far different to such as give rise to mere casual remarks and thoughtless ejaculations. We should learn therefrom to improve every opportunity which may offer of obtaining spiritual knowledge; to derive instruction from every circumstance that may present itself to our minds; to meditate on our own approaching dissolution; and to apply to Jesus, the Saviour of sinners, to rescue us from the consequences of our manifold transgressions.

It has been urged that this forgetfulness of futurity, this lethargy of the soul, is a principle of our nature, and that a contrary tendency, by fixing the mind too much on the concerns of another world, would unfit us for active duty in the present. Surely they who argue thus know but little of Christianity; they certainly can never have felt the force of the bright prospects of bliss beyond the grave, which religion affords to those who seek it in the paths of truth. "If in this life only we have hope in Christ, then we are of all men most miserable." "Let us eat and drink, for to-morrow we die." But it is not so. We have glorious hopes beyond the tomb; why then should we shrink from contemplating the passage which admits us to them? We have a glorious inheritance prepared by God in Christ for those who love him; let us not then dread the path which conducts us to it.

The mind thus disposed, will derive comfort from those events which are by many supposed to engender only melancholy. It will contemplate the departure of friends and relatives with a moderated sorrow, knowing that they are not lost, but gone before. It will look upon the poorer ensigns of grief with a reflection that in another world the only distinction will be between the righteous and the wicked. It will remark the more splendid appendages of sorrow, and feel a joy when it beholds the motto so oft inscribed on them, *Resurgam*, "I shall rise again." J. W. H.

THE LANGUAGE OF THE BIBLE.

On looking at the language of the Bible, it will be found, not an arrangement of abstract theological terms, but a history of God's dealings and of man's actions. The language of the Bible is the language of action. Yet, as actions remain ever the same, the language of the Bible is always intelligible. It is, therefore, the only extensive book capable of translation into any language, embraced, on the one hand, by the meagre vocabulary of the savage; yet exhausting, on the other, the most copious expressions of the philosopher. Take the Bible to Tahiti; and the moment the missionary has learned the language, he finds in it expressions for all the wonderful things of God: but let him attempt to translate into the same tongue Newton's "Principia," or Locke's "Essay," and he will find the task utterly impossible. The savage having few abstract ideas, can furnish few abstract terms: the fountains of wisdom must, therefore, remain shut up, until progressive improvement furnish him with a vehicle.—*Dr. Cooke.*

CHRISTIANITY.

The defensive armour of a shrinking or a timid policy does not suit Christianity. Hers is the naked majesty of truth; and with all the grandeur of age, but with none of its infirmities, has she come down to us, and gathered new strength from the battles she has won in the many controversies of many generations. With such a religion as this, there is nothing to hide. All, all should be above board. And the broadest light of day should be made fully and freely to circulate throughout all her secrecies. But secrets she has none. To her belong the frankness and the simplicity of conscious greatness; and when then she grapples it with the pride of philosophy, or stands in fronted opposition to the prejudices of the multitude, she does it upon her own strength, and spurns all the props and all the auxiliaries of superstition away from her. —*Dr. Chalmers.*

HAT MAKING.

Instead of the last sentence in "Hat Making," page 27 of this Volume, *read*, To prevent this, zinc has been attached to produce a current of electricity, which, as some persons imagined, would hinder the adhesion of those substances that would otherwise attach themselves to the copper. Felt is placed between the copper and the timber.

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ANSWERS TO OBJECTIONS MADE AS TO MOSES BEING THE WRITER OF THE PENTATEUCH.

HAVING noticed the proofs that Moses was the inspired writer of the Pentateuch, (p. 132,) we shall proceed to answer some objections which have been raised by infidels.

First objection.—The books contain some passages of which Moses was not the writer.

This is true. Who ever wrote a historical work extending through a period of twenty-five hundred years, without making some quotations from preceding writings? And does the existence of such quotations, accurately and literally made, diminish the value of the history, or increase it?

In Numb. xxiii. xxiv. there are some highly finished and magnificent passages of poetry ascribed to Balaam. If the book be worthy of credit, these are not the compositions of Moses, but of Balaam; for Moses does not profess to write fiction, but true history. Numb. xxi., verses 14, 15, there is a quotation from an ancient writing called "the book of Jehovah's wars;" verses 17, 18, a quotation from a joyous song of the Israelites, with which they celebrated the unexpected discovery of a well in the Arabian desert; and verses 27—30, an extract from an ancient war-song of the Amorites on occasion of their victory over Moab. We suppose all these passages to be what they profess to be, namely, quotations, and not compositions by Moses; for if Moses did write them, they must be fictitious, and not true, as they profess to be.

Again, Gen. xlix. we have the dying address of Jacob to his sons, apparently word for word as he uttered it; and Gen. xxvii. the blessing of Isaac on his two sons. So, several of the first chapters of Genesis, if we may judge from their style and structure, and the several distinct titles by which the different narratives are introduced, are not selections made by him, under Divine direction, from very ancient documents, in his possession, by different writers at different periods. Perhaps the same may be said of Gen. xxxvi. which gives an account of the posterity of Esau; and of Gen. xxxviii. which relates the crimes and follies of Judah and his sons.

For proof of the compilation of the early parts of Genesis from several different and very ancient documents, I refer my readers to a single fact, which is very obvious in the English translation, and still more so in the Hebrew original; I mean the different names of the Supreme Being, which occur in them.

In Gen. i. ii. 3 (the second chapter properly beginning with what is put as the fourth verse, as the title, *These are the generations*, shows) the name of the Supreme Being is uniformly God, *a'lohim*. In the second portion, including ii. 4—iii., the name of the Supreme Being is uniformly Jehovah God, *y'hovah a'lohim*. In the third, including chapter iv., it is Jehovah only. In chapter v. God only, except in verse 29, where a quotation is made, and the name Jehovah used. In vi.—ix. God and Jehovah are used promiscuously, except once, ix. 26, where a quotation is made, and the name Jehovah God is used. In xii. xiii. Jehovah only. In xiv., in connexion with Melchizedec, there is a name of the Supreme Being altogether peculiar, that is, God Most High, *ael elyon*, except verse 22, where Abraham prefixes to this appellation the name Jehovah. Each portion uniformly preserves the same name, except when a quotation is made, and then the name used by the person introduced as speaking, is inserted. It is perhaps impossible to decide definitely respecting the amount of quotation of this kind, but in the first fifteen chapters of Genesis it seems to be considerable.

Now do all these accurate quotations impair the credit of the Mosaic books, or increase it? Is not their value greatly enhanced by this circumstance? The objection is altogether futile. In the common editions of the Bible, the Pentateuch occupies about one hundred and fifty pages, of which perhaps ten may be taken up with quotations. This surely is no very large proportion for a history extending through so long a period.

Second objection.—The books contain some passages which could not have been written till after the death of Moses.

This also is true. Deut. xxxiv. relates the death and burial of Moses, in the style of plain history. Again, Gen. xxxvi. 31—39, there is a continuation of the catalogue of Edomitish chiefs, supplementary to the original catalogue left by Moses.

But the strength of this objection, by those who offer it, is made to rest principally on the change of obsolete for

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well-known names of places. For example, Gen. xiv. 14, it is said that Abraham pursued the eastern chieftains to Dan; but in Joshua xix. 47, and Judges xviii. 29, we find that this city was then called Leshem or Laish, and that it was not called Dan till some centuries after the death of Abraham, when it was taken by the Israelitish tribe of that name, and made their chief city. So in Gen. xiii. 18, Hebron is mentioned; but we find by Joshua xiv. 15, and xv. 13, that the original name of the city was Kirjath-Arba, and that it did not receive the name of Hebron till several centuries after the time of Abraham. So in regard to Bethel, Gen. xiii. 3, originally called Luz, Gen. xxviii. 19.

There are some other passages of the same kind, but those enumerated are sufficient to set forth the objection in all its force. The facts are admitted, the inference denied.

It is a necessary part of the economy of revelation, that subsequent sacred writers should be authorized to give such additional notices and make such verbal changes in the preceding books, as might be necessary to render them intelligible to succeeding generations. Examine the passages objected to. It is important, as matter of history, to know something of the death and burial of Moses, and these facts are inserted in their proper place. In modern books, these necessary additional notices are put in by way of note or appendix; but the ancients wrote whatever was necessary to be written in the text. Interpolation, or something added aside from the author's purpose, is a very different thing from a note in explanation or illustration of a writer, added by an authorized hand, in exact and ascertained coincidence with the author's design.

Examine next the change of names. Observe, the Hebrew name is substituted for the pagan—the sacred for the profane. Where a place was generally known by both names, both are inserted: see Gen. xiv. 2, 7, 8; Deut. iii. 9; iv. 48, and numerous other passages. Where the pagan or ancient name had become entirely obsolete, in the process of transcription, the obsolete name was either entirely omitted or mentioned only once or twice, for the purpose of explanation, as in the cases of Laish, Kirjath-Arba, and Luz, above referred to. Now is not this just as it should be? The thing wanted is, to direct the mind of the reader to the right place; and how is this to be done, but by calling the place by the name by which it is known to the reader?

Something also has been attempted in the way of objection from the expression, "and the Canaanite was then in the land," Gen. xii. 6; xiii. 7, and other places; as though this expression implied, that at the time when these books were written, the Canaanites must have been already expelled. Nothing can be more empty and vain than this objection. The Canaanites originally dwelt on the coasts of the Persian gulf, (Eichhorn's Introduction, vol. iii. p. 169,) and had no inheritance in the land of Canaan, which God had given to Abraham, but into which they had emigrated. It is the intention of the sacred writer simply to show, that when Abraham went to take possession of the land which God had given him, the Canaanite was already there before him.

The proper meaning of the Hebrew word אז, *aaz*, (in these passages translated *then*,) is *at that time*. (See Gesenius's Hebrew Lexicon, Leipsic, 1833, on the word.)

The objection derived from what is said of the name Jehovah, Exod. vi. 2—8, is equally groundless. It is the meaning of the word, *the Self-existent, the Unchangeable*, that is here brought to view. Compare Exod. iii. 14. In his dealings with the patriarchs, God had shown himself to be the *Almighty*; in his dealings with their descendants, he would show himself to be the *Self-existent* and *Unchangeable*.

The same objection is insisted upon by reference to such passages as Deut. iv. 46, 47, 49. It is alleged that these passages should be translated "beyond Jordan," or "on the other side of Jordan," and not "on this side Jordan," as in our translation; and that, as these passages refer to places east of Jordan, and as Moses must have written on the east side of the river, and not on the west, these passages could not have been written by him.

Admitting the statement to be true, the same answer that is given in respect to the change of names, is applicable also here. But the objection is groundless in point of fact. The Hebrew word, which the objection assumes to be restricted to the meaning "beyond" or "on the other side," has, by the custom of Hebrew speech, a more extensive and

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indefinite application; and which side of the river is intended, is designated by adding to the word *eastward*, or *westward*. For proof of this, examine Josh. v. 1; ix. 1; xii. 7; 1 Chron. xxvi. 30, where the same word is used in reference to the western side of Jordan; so that if the use of this word in Deuteronomy proves that the Pentateuch was written after the Israelites dwelt on the western side of Jordan, the use of the same word in the other passages quoted, must prove that the books of Joshua and Chronicles were written while they dwelt on the east side of Jordan, which is contrary to well known and universally acknowledged fact.

The same principles apply to all other objections of this class, and it is unnecessary to specify particulars any further.

Before we leave this objection, it will be interesting to consider one fact in reference to the Pentateuch, which, to a mind accustomed to investigations of this sort, affords indubitable evidence of its authenticity. It is this, that in the minutest circumstances the narrative accurately corresponds to the manners appropriate to each period and place. This is one of the most difficult achievements in works of fiction; and the most laboured and ingenious attempts at literary forgery have been detected by slight inaccuracies of this kind, of which the frauds of Chatterton and Ireland are memorable examples. Much more difficult, and, indeed, utterly impossible would it have been to preserve this congruity in a fictitious work running through so long a period, and embracing such a variety of manners, as come within the scope of the Pentateuch. All ancient attempts at forgery are, in this respect, awkward and incongruous in the extreme, and open to immediate detection.

Examine a few passages in the book of Genesis in reference to this point. Let us trace the gradual rise and increase of commercial intercourse, Gen. xxxvii. 25; xli. 57; xlii. 27. In Abraham's time there were no such facilities for trade; and when a famine arose in Canaan, he took his family into Egypt to find sustenance, Gen. xii. 10. Observe the primitive simplicity of the regal office, and the gradual development of a formal and luxurious court in Egypt, Gen. xiv. xii. 14, 15; xliii. 32; xlvii. 7; xl. l. Compare xxi. 22; xxvi. 26. In Mesopotamia, we find Jacob receiving compensation, not in silver and gold, but in flocks, and herds, and servants, Gen. xxx. xxxi.; but in Canaan, in the neighbourhood of the Phenician merchants, we see money told by weight even in Abraham's time, Gen. xxiii. 16; and in the time of Jacob, coin is in circulation, Gen. xxxiii. 19. So in the first part of Genesis we hear nothing of horses and carriages; and they are first mentioned when Joseph sends for his father to come to Egypt, Gen. xlv. 19—27; xlvii. 17. This corresponds to the historical fact, that the Egyptians were the first people who trained horses for domestic use. Compare 1 Kings x. 28, 29. Thus in all the little circumstances by which literary forgeries are always detected, we find the Pentateuch minutely accurate, and giving the most unequivocal proof of authenticity.

Third objection.—The language and style of the Pentateuch, it is said, too nearly resemble that of the later writers, to admit the supposition that it was written in the age of Moses.

This allegation is denied entirely. There is a striking difference in language and style, both generally and in the use of single words. The differences of orthography are very great, and of the same kind with those we observe in English books written at different periods. There are also in the Pentateuch many words, which are obsolete in the subsequent books, either not used at all, or used in an entirely different sense. Professor Jahn, of Vienna, has enumerated more than two hundred words of this kind, exclusive of those which occur but once, and of those which there might be no occasion to use in the subsequent books.

It is also worthy of notice, in reference to this objection, that all the foreign words, which occur in the Pentateuch, are Egyptian, while the foreign words of the other books are Aramean. Now, the Arabians spoke essentially the same language as the Hebrews, and allowing these books to have been written by Moses, the Egyptian was the only foreign language from which words could have been borrowed; but on the supposition that the Pentateuch was written after the Hebrews were settled in Canaan, the foreign words must have been borrowed mostly from their Syrian neighbours, as is the fact in reference to all the books written after that period.

Again, most of the changes which take place in the orthography of a language,

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occur in the vowels rather than in the consonants, and as the Hebrew Bible was originally written mostly without vowels; these being added by the Massorites after the Hebrew had ceased to be a spoken language; there must of course be much fewer archaisms than occur in books where the vowels are all written.

Again, changes in language are produced by change of circumstances, advancement in the arts and sciences, intercourse with foreigners, multiplicity of writers, etc. Now as the Hebrews were a simple, secluded, agricultural people, avoiding intercourse with foreigners, and religiously attached to every thing inherited from their ancestors, there was very little change of language, till the time of the Babylonian captivity, when it underwent a very great change.

Fourth objection.—The inequalities of style and fragmentary structure of the whole work, show that the Pentateuch could not have been the composition of one man in one period, but of several men at different periods.

In reply to this objection, we say—

1. It has already been shown, that though Moses was the writer of these books, there are inserted literal and somewhat copious extracts from inspired writings still more ancient; so that there are in fact, in this work of Moses, fragments of the writings of several men, at different periods.

2. It has been shown, that the circumstances under which Moses wrote, necessarily led to those differences of style, and the fragmentary structure stated in the objection; and that if the fact on which the objection is founded did not exist, it would be a very strong presumptive argument against the authorship of Moses.

3. The contents of the books are various, and therefore the style and structure ought to vary to suit the constant variety of subject.

In the books of Moses, we have plain narrative, dialogue, impassioned eloquence, the lyric ode, the didactic poem, legal enactments, and every variety of composition known in ancient times; and written, too, under every variety of circumstance, from the vigour of manhood, and the pressure of care and numerous engagements, to extreme old age and comparative ease.

Examine even the different compositions of human authors, and you will find as great inequalities of style as you can find in the books of Moses. A forgery would be altogether likely to preserve greater uniformity.

4. The general unity of design manifest in the books of Moses has already been alluded to.

In favour, then, of the authenticity of the five books of Moses, we have

1. The unanimous and uncontradicted testimony of antiquity. 2. With this all the internal evidence exactly corresponds, as has been exemplified in a variety of particulars. 3. The declarations of the books themselves could have been made by none but Moses. 4. The whole series of Hebrew literature rests on these books, and demonstrates that they emanated from Moses. 5. The contrary hypotheses are self-contradictory, and entirely without foundation. 6. All the objections to the authenticity of these books are capable of an easy and satisfactory answer.

Thus, even on the lower grounds, and without here noticing the direct proofs of Divine inspiration in these books, the objections of the unbeliever are fully and satisfactorily answered.

In conclusion, I request the reader seriously to ponder the following plain questions:—

1. Why is it that men demand evidence in regard to the Bible, which they never think of demanding in reference to any thing else; and which, in relation to all other subjects, they would pronounce at once to be unreasonable?

2. Why do they allow weight to objections in reference to the Bible, to which they would allow no weight whatever in reference to any thing else; and which, in relation to all other subjects, they would pronounce at once to be absurd?

This is a practical matter of the deepest interest, and every man must decide and act on his own responsibility.

From C. E. Stowe.

ROSE AND CROWN LANE;

OR,

A SKETCH OF MY NEIGHBOURHOOD.—No. IV.

I HAVE mentioned my own house as No. 3.

My next door neighbour, at No. 4, is Mrs. Duncan, a widow lady, who, having experienced many trying vicissitudes of circumstances, lives in a retired way on a very small income, maintaining, however,

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a respectable and genteel appearance, and exemplifying the superiority which belongs to an enlightened mind, sound religious principles, and conscientious conduct; a superiority which the rudest shock of outward circumstances can never shake. Some people are considered great, only because they are surrounded by external circumstances of grandeur, because they have much riches to spend, much finery to display, many servants to command; but let them be stripped of these external circumstances, which are no part of themselves, and what remains but littleness and insignificance? nothing whatever to command esteem, and but little to excite sympathy. Others are great, independently of circumstances; in affluence, they are great in moderation, condescension, and benevolence; in poverty, they are great in tranquillity, resignation, and contentment.

"Pigmies are pigmies still, though perch'd on Alps;
And pyramids are pyramids in vales."

My neighbour, Mrs. Duncan, displays much of this true greatness of character. She has lived in good society, and has been accustomed to all the elegances and indulgences of affluence, yet she is not at all disposed either to repine at present privations, or vainly to boast of past grandeur. "I was not brought up to it," is often the murmur of a proud, rebellious spirit, when the former elevation was not very considerable. Such persons, having no real greatness of their own, endeavour to wrap themselves in the shadow of it, by boasting of their great connexions, high expectations, and bitter disappointments. There are, however, those who can feel thankfulness in having been brought down to many things, to which they were not brought up. Such I have reason to know is the case with Mrs. Duncan. She considers the loss of earthly substance as a trial sent in mercy to remind her that earth is not her rest, and the bereavements she has suffered as additional inducements to set her affections on things above, and to have her treasure and her heart in heaven.

It is needless to detail the particular circumstances by which my neighbour was stripped of her wealth. She, however, after being for many years the mistress of a large house, with servants and a carriage at command, found herself reduced to a small income, with the charge of a little orphan grand-daughter, the offspring of her only child, who, as well as her husband, had died in India. The father of this child having been in the Company's service, a small provision is secured for her maintenance and education. The whole, however, though to persons of humbler birth and expectations, it might seem a comfortable provision, must, to those accustomed to such very different resources and expectations, appear little short of destitution. The sudden descent into the vale of obscurity never deprived my neighbour of self-possession. She gathered together the remainder of her property, selected from it such articles of furniture as were most adapted to the humble dwelling she was about to occupy, and disposed of the remainder; then set herself to arrange the interior of her habitation with the same good taste she had formerly displayed in her elegant mansion, and with such activity and propriety as if she had been constantly accustomed to discharge the humble duties of a servant. The quality of the furniture retained, indicates the sphere in which she had been accustomed to move. The books on her shelves are elegantly bound. The few articles of family plate she possesses are massive and richly chased. Her household linen and wearing apparel, and that of the child, though not modern, are rich and costly. Her manners and habits are in every respect those of a real gentlewoman. The down stairs room, although furnished with a Yorkshire grate, by which something like the appearance of a kitchen is retained, in its other furniture and general aspect more nearly resembles that of a neat common parlour, the back place being fitted up as commodiously as possible to answer the purpose of a kitchen. The first floor apartment, from the goodness of its furniture and the tastefulness of its decorations, is much more worthy the name of a drawing-room than many that are dignified by that appellation. The attic is occupied as a bed-chamber by the lady and her grand-daughter. A small French bed, or cot, which usually stands in that apartment, is occasionally removed to the lobby, and occupied by the little girl, when that of her grandmother is shared by an old friend, who pays her an annual visit, or when the assistance of any female attendant is required in cases of sickness. It will be observed, that no room remains for the occupation of a regular servant, nor does Mrs. Duncan consider it essential to her dignity and comfort, or find that her resources will

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allow her to keep one. The daughter of one of the neighbours, whom I shall hereafter have occasion to mention, comes in daily, to light the fire, clean the grate, fetch water, and do any rough dirty work that may be required, and once a week remains the whole day thoroughly to clean the house. Mrs. Duncan, assisted by her grand-daughter, who is now eleven or twelve years old, makes her own bed, keeps the rooms in order, and attends to her own little marketings and cookery; nor does she feel herself at all degraded by these humble employments, but goes about them with as much ease and cheerfulness as if she had been all her life accustomed to them. Totally unlike Mrs. Brown, however, she does not find her element in them; they are quickly discharged as necessary duties, and to a well constituted mind, agreeable, because they are duties, but then they are dismissed and forgotten for some employment more intellectual and congenial to her taste. She educates her grand-daughter, which she considers the immediate business of her life. Aware that she will not have a large portion to leave her, her chief solicitude is to enrich her mind, and qualify her, by the inculcation of right principles and the formation of good habits, for passing through life with comfort to herself and usefulness to others in whatever sphere she may be called to move.

Mrs. Duncan herself had a highly polished education, and is fully competent to impart to the object of her charge such a knowledge of polite accomplishments as will place her on a level with young ladies who have had a first-rate school education; but her kind grandmother is chiefly intent on mental and moral cultivation, on teaching her to think and feel aright, to regulate her temper, to improve her time, to methodize her employments, and to turn to practical and benevolent account all the knowledge she acquires. The earliest efforts of the little girl's industry were employed in knitting socks for a little bare-footed baby, and making up an old garment of her own for a poor child rather younger than herself; and the recent productions of her ingenuity and taste in fancy work and painting formed a contribution towards the stock of a bazaar for the benefit of the county infirmary. The articles furnished were universally admired for their elegance; they found a ready sale, and proved a valuable addition to the funds of the institution. The old lady, too, presented several articles, ingeniously worked up from old fashioned materials, among her little hoards. Thus, though no longer able to appear as the contributor of guineas to the subscription list, by the exercise of industry, with scarcely any expense, my kind neighbour has been able to become an equally efficient benefactor. Nor is her benevolence confined to extraordinary acts of occasional kindness; it is an all-pervading and constantly operating principle. I believe the desire is never absent from her mind to be doing good, and to find out ways of doing good, which apathy and indolence would overlook. Mrs. Duncan does not go much abroad for pleasure, but she is never backward to obey the call of charity. Having formerly had much experience of sickness in her own family, she is well qualified to render assistance to others in the time of affliction. Her delicate and judicious attentions render her a peculiarly valuable visitor in the sick chamber. In several instances, she has been a great blessing in the neighbourhood, in counteracting the ignorance and prejudice which too often defeat the endeavours of the most skilful medical men; and although she has not a great deal to bestow beyond her kind attentions, she has often called the attention of the affluent to cases of real distress, which would otherwise probably have been entirely neglected. There are two or three wealthy families in the town, by whom Mrs. Duncan is highly respected, and her society is courted; she chiefly avails herself of these connexions, as they enable her to become the instrument of good to others. Her recommendations are always attended to, and her judicious suggestions either to the poor or their benefactors, secure the most efficient appropriation of the benefit. I know the remark was made by a very kind hearted gentleman of property, "I am sure that if my guinea goes through Mrs. Duncan's hands, it does as much good as two given by myself."

Among many other benevolent actions, Mrs. Duncan has taken by turns three little girls of a poor widow woman, and given an hour or two each evening to instructing them in reading, writing, and needlework, employing them also in her own little household matters, by which they have been fitted for domestic service, in which two of them are very satisfactorily engaged. One continues to assist her mother, (who lives at

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No. 9,) and also attends daily to such business as Mrs. Duncan requires. On Sunday, too, the good lady devotes a portion of her time to instructing these girls, and a few more, in a knowledge of the Scriptures, and of their moral and religious duties.

The extremely neat and clean appearance of Mrs. Duncan's cottage, within and without, would render any person seeking a servant desirous of engaging one who had been trained under her instructions; and the girls above-mentioned have found their advantage in this particular, both as introducing them to good situations and qualifying them to fulfil the duties of those situations with propriety. I have noticed the ingenuity displayed by Mrs. Duncan and her grand-daughter in their fancy productions; these qualities are also called into requisition in the manufacture of their own apparel, the whole of which is made at home, and also preserved and mended with the utmost care and neatness. These thrifty practices are adopted, I believe, not merely for the sake of economy, but also for the purpose of initiating the grand-daughter into so useful a branch of female education.

The garden is a favourite spot of activity and amusement; indeed it may be regarded as the only thing in which Mrs. Duncan indulges herself in any expense of time or property for the mere purpose of recreation. She is exceedingly fond of the cultivation of flowers, and has a considerable knowledge of botany, as well as a great aptitude for imitating nature. The little girl having been from infancy the observer and companion of her grandmother's pursuits, has imbibed the same taste for a garden. The little spot is entirely cultivated by themselves, and though so small, is laid out with exquisite taste, and contains a choice collection. I have stated that Mrs. Duncan is acquainted with several of the principal families; from their green-houses she is chiefly furnished with slips, cuttings, or seeds of choice plants or flowers, which she is both skilful and successful in rearing. I spoke of mere recreation, but hers is certainly not a selfish recreation; a nosegay from Mrs. Duncan's garden often enlivens the window of a sick room, and a bunch of sweet herbs often accommodates a neighbour, or contributes to the stock in trade of a poor lame girl who attends the market. Throughout the year her garden is a gratifying object, and regales the senses of her neighbours as well as her own. I am grieved to say that it was once maliciously robbed, several choice plants were taken, and many more damaged and thrown into confusion. Mrs. Duncan could not behold without regret the destruction of the objects of her favourite amusement. However, she bore the vexation as a Christian; and, by the way, the Christian temper is as much displayed in bearing with calmness and equanimity what may be called a trifling vexation, as a heavy loss. She immediately set about repairing the mischief, observing that she hoped she had not in any way provoked the neighbours to injure her; she regretted that any one should be guilty of such an action, but heartily forgave the perpetrator of the mischief, and said she must receive it as a check against indulging herself in too great fondness for her garden, of which she feared there might be some danger.

Once a year Mrs. Duncan, accompanied by her grand-daughter, takes a journey to visit her relations, and to receive her little income. She is absent about a month, during which time I feel myself honoured in being intrusted with the care of the premises, though often afraid that things will suffer from want of the skilful care and watchful eye of their owner. However, I do my best, which is accepted with genuine kindness and uncalled-for expressions of gratitude. Though not weary of my charge of the house, the letter is always welcome that announces the return of its inmates, as I truly value the society of my neighbour, and feel quite at a loss when deprived of her instructive conversation and friendly intercourse. It affords me great pleasure to observe that the little girl, whom she has so tenderly cherished, is exceedingly affectionate, grateful, and dutiful, and in every respect bids fair to requite her maternal assiduity, and to become the support and solace of her declining days. I hope and trust this expectation will be realised. And now, in taking leave of my respected neighbour, the reader will, I think, be disposed to admit, that a person may be reduced, yet not degraded; retired, yet not useless; limited in means, yet not circumscribed in liberality; the subject of painful vicissitudes, yet the possessor of unshaken grounds of support, and unfailing springs of felicity.

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LOVE OF REPUTATION.

If the false glory which men pursue, is on the one hand a proof of their misery, it is on the other an attestation of their excellence; for whatever degree of riches, health, and other benefits men enjoy, they are still dissatisfied unless they find themselves in the good opinion of their own species. Human reason challenges so much esteem and reverence from us, that, under the most advantageous circumstances of life, we think ourselves unhappy if we are not placed to an equal advantage in men's judgments. This we look on as the fairest post that can be attained; nothing is able to divert us from so passionate a desire; it is the most indelible character in the heart of man; insomuch that those who think so contemptuously of mankind as to make the very beasts of the field their equals, yet contradict their own hypothesis by the motions which they feel in their own souls. Nature, which is stronger than all their reason, convinces them more powerfully of man's greatness, than reason can persuade them of his meanness.—*Pascal.*

THE LAMB OF GOD.

The propitiatory death of our great High Priest was foretold in the earliest promises, and prefigured in the ancient types. The dying Jesus was represented by the paschal lamb, which was sacrificed in Egypt, instead of the first-born of the Israelites; the blood of which, being sprinkled on the door-posts of their houses, secured them from the sword of the destroying angel. For, as the paschal lamb ransomed the first-born, being sacrificed for them, so Jesus delivers believers from the sword of Divine justice, by dying in their stead. It is necessary, however, to be observed, that as those things which were but imperfectly represented under the law, are fully accomplished under the gospel, there is this difference between the type and the antitype; the former, though not an equivalent for the life of a man, was accepted of God; because the design then was, not to make satisfaction to God's justice, but only to prefigure that sacrifice which was to make a full satisfaction. But Christ is a worthy ransom; a substitute whom we need not fear being rejected as inferior to those for whom he dies. He is therefore called, "The Lamb of God." He is *the* Lamb, by way of excellence; the only Lamb that can atone for our sins, and ransom our souls. Such is the import of the phrase, according to the style of inspiration; in which it is common to add the Divine name to any thing that is peculiarly excellent, great, or remarkable; as, for instance, "The mountains of God;" "the cedars of God;" "the garden of God:" and here, "The Lamb of God."—*Abbadie.*

THE DIVINE DEALINGS.

See from whence it is that some judicious Christians give a notable guess at the issues of matters. In point of communion, they live nigh to the great Landlord of the world, and so they know some of his ordinary walks hither and thither. One while he useth to walk up the hill, another while down into the valley; this they know and take notice of. Besides, the great God is pleased sometimes to tell whither he is going, Gen. xviii. 17, "And the Lord said, Shall I hide from Abraham that thing which I do?" So also Amos iii. 7, "Surely the Lord will do nothing, but he revealeth his secret unto his servants the prophets." It is said of Luther that he had a foresight of the calamities to come on Germany. Archbishop Usher also foresaw the time of the memorable tragedy in Ireland. The sermons of some pious ministers have been better understood by their hearers some years afterwards than when delivered.—*Crane.*

THE POTTER.

"Go down to the potter's house."—*Jer.* xviii. 2—4.

And what may you learn there? Is not the clay ductile, pliable, obediential to the hand of the potter? And should not a Christian labour more and more to have his will moulded or fashioned to the will of his Maker, in point of holy submissions? "Carry back," said David to Zadok, "the ark of God into the city: if I shall find favour in the eyes of the Lord, he will bring me again, and show me both it, and his habitation; but if he thus say, I have no delight in thee; behold, here am I, let him do to me as seemeth good unto him." 2 Sam. xv. 25, 26.—*Crane.*

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See page 202.

ENGLISH HISTORY.

HENRY VI.

We are now about to enter upon a period of English history which is deeply interesting, not only from the events which occurred therein, but from its showing, in a most remarkable manner, the dealings of Providence with nations, causing the offences of public bodeis to be instrumental in bringing down judgments upon them.

Both France and England had given themselves up to the papal power; and at its bidding their rulers had taken an active part in "wearing out" the saints of the Most High. It was not long before judgments, very similar in their leading features, were poured in succession upon each of these lands. France had first been guilty, and was the first to suffer. Internal dissensions prevailed; civil war followed, and the land was desolated; especially when an invading power took advantage of the intestine contests. England was the instrument used to correct France; but England had been guilty in a like manner, and it suffered in its turn. Civil discords arose; the land was desolated; and the rulers who had done much to bring down the Divine wrath, were themselves particularly the sufferers.

When Henry v. died on September 1, 1422, his infant son, then only nine months old, was proclaimed king, by the title of Henry vi. The government was vested in the late king's brothers. The eldest, the Duke of Bedford, was nominated protector, but as he was chiefly engaged in France, the younger brother, the Duke of Gloucester, became chief ruler in England.

The King of France, Charles vi., did not long survive Henry v., who had been appointed his successor. He died in October, and the infant monarch, the son of Henry v., was proclaimed at Paris, King of France as well as of England. The Dauphin, however, assumed the regal title, and under the title of Charles vii., was acknowledged by one-third of France, chiefly the south-eastern provinces. Had the French monarch expired while Henry v. was living and powerful, probably no effectual effort would have been made in support of the Dauphin; but under the rule of a protector, whose abilities and powers were somewhat inferior, the partisans of Charles vii., assisted by Scotland, ventured to make a struggle. Two battles ended unfavourably to Charles, and it seemed impossible for him to continue the contest with any hopes of success, although Bedford was not assisted with

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men and supplies to the extent he desired.

At this critical juncture, events occurred which changed the current of English victory.

Jacqueline, of Hainault, left her second husband, the Duke of Brabant, and repaired to the court of England, where the Duke of Gloucester, in a hasty and ill-advised moment, became her third husband, and obtained from a competitor for the popedom, a sentence of divorce dissolving her late union. Brabant cared not for this ill-conducted woman; but he refused to surrender the territory which Gloucester claimed in her right, and applied to his cousin, the Duke of Burgundy, then the chief ally of England, who espoused his cause. The Duke of Bedford was much displeased at the misconduct of his brother Gloucester, and endeavoured to prevent the ill consequences likely to ensue. After various negotiations, and some hostilities, the Pope annulled the English marriage of Jacqueline, and the vicious Gloucester formed another hasty union with Eleanor Cobham, one of Jacqueline's attendants, who had already disgraced herself. Such proceedings weakened his influence as a ruler, while they strongly confirm the declaration of Holy Writ, that "an adulterer lacketh understanding;" and we are further told, that he "destroyeth his own soul." By this vice, Gloucester, though possessing many qualities which rendered him popular, gave advantages to his great opposer, Beaufort, the crafty and ambitious Bishop of Winchester. How careful should every one be to keep from "the evil woman, from the flattery of the tongue of a strange woman!" This caution especially applies to rulers, whose rank and station expose them to many temptations.

These differences interrupted Bedford in his progress, and gave the partisans of Charles time to regain some strength. Nor was Burgundy guiltless in these matters; his addresses to the Countess of Salisbury induced her husband to return to England for a time, and thus the English power in France was considerably weakened. The open licentiousness of all ranks at this period, strongly testifies against the principles inculcated by the Church of Rome, and shows how different were the actual practices of chivalry from its professed principles.

The discord between Gloucester and his uncle, the Bishop of Winchester, proceeded to open hostility, and a skirmish between their followers, at London bridge, was with difficulty ended by the Archbishop of Canterbury and other nobles. The interference of Parliament was needful, and the contending rulers were constrained to an outward amity. The ambitious churchman obtained the dignity of cardinal, and he undertook a crusade against the followers of Christ in Bohemia, who were then persecuted by the popedom. He raised troops under this pretence, but led them to France to join the army of his brother Bedford.

This brings us to 1428, when the protector again resumed active measures against Charles. The infant monarch of England had meanwhile continued under the care of his mother and the Bishop of Winchester. On more than one occasion, he had been produced in public, and made the unconscious instrument of giving charters and appointments. The engraving on page 201 is copied from an ancient drawing in the Life of Richard Beauchamp,

Richard Beauchamp, Earl of Warwick.

Earl of Warwick, under whose especial tutelage Henry was placed at the age of six years. It represents his coronation in France, which Southey has thus described:—

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——————— In Paris now
The invader triumph'd. On an infant's head
Had Bedford plac'd the crown of Charlemagne,
And factious nobles bow'd the subject knee
In homage to their king, their baby lord,
Their cradled mighty one.

The Earl of Warwick appears to have possessed some of the better qualities of chivalry. He applied for and obtained the entire direction of the education and rearing of the young prince; but, whatever might be the cause, Henry VI. manifested any thing but the knightly character of his preceptor. It is possible that Warwick may have endeavoured to enforce some of those rigorous proceedings which the laws of chivalry prescribed for the training up of the incipient knight, and thus may have broken a spirit naturally weak.

Had Henry VI. been found only indisposed for war, there would have been no cause for regret; but, in the result, he proved a mere puppet in the hands of others, a slave of superstition, enfeebled in his reason and understanding.

The English forces engaged in the siege of Orleans, a strong city, defended with great obstinacy. The besiegers suffered considerable loss, and the Earl of Salisbury was slain by a cannon shot, while viewing the town from an outwork which the English had carried. "Look from this place, my lord, on your city," was the premature invitation of Glasdale, one of his officers, when a stone ball struck the earl, and shot away part of his face, and he died in a few hours. The superstitions of the age increased the dread of the effects of gunpowder, and held those accursed "who died by great shot;" men forgot that the state of the soul, not the instrument of death, decides the question of happiness, both as to this world, and that to come.

The siege proceeded, and the success of the English appeared certain. Charles VII. already considered his cause desperate, and prepared to seek a refuge in Scotland, or in Spain. But the history of nations has often shown that "the battle is not to the strong;" and that "the day of the Lord of hosts shall be upon every one that is proud and lofty, and upon every one that is lifted up; and he shall be brought low." The ambition of Henry V. had been suffered to find full gratification, till disease and death stopped his career. His brothers had been permitted to advance in the same course, till their plans seemed about to be fully accomplished. It is true, that some indications of ebbing success had been shown; but again the flood had advanced, and appeared just about to overcome the only remaining obstacle, when the command went forth from the Almighty Ruler, "Hitherto shalt thou come, but no further; and here shall thy proud waves be stayed." Then success departed, and failure followed upon failure, till the ambitious rulers of England, the haughty sons of violence, who oppressed the weak and the poor of their own land, and destroyed the helpless among their opponents, were themselves visited in their turn. We know how the course of a mighty conqueror, in recent days, was stayed and turned by the war of elements, when the storm and tempest went forth at the bidding of the Creator; but the power of England at this period was checked by a still more feeble instrument: a shepherd girl was the means appointed to discomfit its princes, and to commence a new course of proceedings, which rolled back the tide of suffering on their own land.

Joan of Arc was a native of Domremy, a small village in Champagne, near the borders of Burgundy, a situation which accounts for the deep interest felt by its inhabitants as to the question whether Henry or Charles should be king of France. The plundering habits of the military; as the property of her father consisted in the cattle and produce of a small farm, would make the proceedings of the parties then engaged in warfare the subject of frequent discussion and deep interest in her little circle. At one period the family had been forced to flee from their homes.

Their wishes were strongly excited in favour of Charles. The human mind is impressed by surrounding circumstances in a deeper or slighter degree, according to the natural temperament of the individual. Joan was correct in her moral character, but had little inclination for the sports and amusements of her sex. She was deeply influenced by the religion, or rather superstition, which prevailed around her; and though she took her part in the duties of the family, she delighted in solitude, and used especially to frequent places in the neighbourhood, marked by fairy legends or supernatural relations. The feelings of Joan were those which arise from an impassioned combination of superstition and patriotism, with a romantic and excited imagination.

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Southey has well depicted her state of mind in the following lines, which she is supposed to utter :—

I sat in silence, musing on the days
To come, unheeding and unseeing all
Around me, in that dreaminess of thought
When every bodily sense is as it slept,
And the mind alone is wakeful. I have heard
Strange voices in the evening wind, strange forms
Dimly discover'd throng'd the twilight air.
The neighbours wonder'd at the sudden change,
And call'd me craz'd.
At length I heard of Orleans, by the foe
Wall'd in from human succour; then all thought,
All hopes were turned, that bulwark once beat down,
All was the invaders'. Now my troubled soul
Grew more disturb'd, and shunning every eye,
I lov'd to wander where the forest shade
Frown'd deepest; there on mightiest deeds to brood,
Of shadowy vastness, such as made my heart
Throb loud: anon I paus'd, and in a state
Of half expectance listen'd to the wind.

The circumstances connected with the early life of Joan are clearly recorded, and when calmly considered, sufficiently explain, that, without any miraculous heavenly influence, and still more without any diabolical agency, a mind like hers, under similar circumstances, would be deeply affected by delusive fancies or hallucinations, which at that critical time were instrumental in turning the tide of events, but which, had her life been prolonged, would probably have left her bereft of reason, a raving or moping lunatic. The minute shades of transition from hallucination to lunacy are not to be easily marked or discriminated; but there is no cause to doubt that many of the most energetic and glorious deeds recorded in history, have been achieved by individuals who were under deceptive impressions as to the organs of sense, in whom, perhaps, the mental malady had begun. The statements of Joan herself sufficiently indicate to the able medical inquirer of the present day, a mind suffering under mental disease, not yet advanced to aberration of reason; and the state of France at that time, with the circumstances in which she was placed, would sufficiently account for the direction her mind admitted, and the impulse it received. This may have been stimulated from the recollection of an ancient prophecy, which declared that wonderful deeds for the deliverance of France should be accomplished by a maiden.

Her visions, or hallucinations, indicated to her that she should be the means of repulsing the English, and placing Charles on the throne. St. Catherine, St. Margaret, and the Archangel Michael, seemed to flit before her eyes in her visions, and to utter voices which she thought directed the conduct she was to pursue. In May, 1428, she prevailed upon her uncle to take her to the lord of a neighbouring village, to whom she declared her mission. Baudicourt three times refused to attend to her. But during the rest of the year she continued to make declarations as to her Divine mission, especially referring to the prophecy that France should be delivered by a maiden. This report got noised abroad, and induced some of the neighbours to think it might refer to her.

About Lent, 1429, she persuaded Baudicourt to send her to Charles. Her journey with an armed escort, the rumours which were spread abroad, and her own romantic and courageous demeanor, excited the public attention. She found the king at Chinon in a state of extremity. The lady of his receiver-general declared afterwards, that in the districts obeying the king, the distress and want of money were lamentable, and that the king himself had but four crowns in his house. He and his friends having no longer any hope, were all meditating flight. Every thing was desperate, and no relief was expected.

In such a state of affairs, suggestions will be listened to, which at other times would at once be rejected; and probably some effort was made to attract public attention, and to invest Joan with more than ordinary pretensions. She was able to recognise the king, though he was purposely crowded among his attendants; and there were other contrivances giving currency to her pretensions, in which she was probably the dupe, and not the agent. She declared that she was come to raise the siege of Orleans; and after three weeks' delay, it was determined that she should be permitted to undertake the adventure. Having been accustomed to the care of horses, she possessed skill in riding, which was a very needful qualification for the part she had to sustain. A suit of armour was fitted for her to wear, she sent to a church for a sword, and one was found, or said to be found, in the place she had indicated. A banner was prepared by her orders, portraying the Saviour holding the world in his hands, while two angels adored before him; the white ground was covered with fleurs de lis. She commenced her march with an

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army of seven thousand men, headed by the most distinguished officers who yet adhered to Charles.

Joan sent a dictatorial summons to the English leaders, commanding them to return home; several bands of military preceded her, and, entering Orleans, announced the approach of a deliverer. She entered unperceived, in the evening of April 30, 1429, with a few attendants, and was received with much joy by the garrison and inhabitants. The next day she uttered her defiance in the hearing of the besiegers, and on the approach of the main body of relieving forces, the English were so far paralysed by dread, as to allow the convoy to pass unmolested.

A series of contests followed, in which Joan headed her troops with fearlessness and ability. She was wounded on one occasion, but the English were panic-struck, and impressed with a belief of infernal, supernatural agency being directed against them. Sometimes they fought with desperate courage, but their apprehensions returned again and again; and, after losing many of their soldiers, and some of their best officers, on May 8, the English generals, Suffolk and Talbot, raised the siege. Whatever their skill in the field of battle might be, they appear to have been ignorant of the general principles for the attack and defence of fortified towns.

Thus was Orleans delivered in eleven days from the time Joan attempted its rescue; and it is not surprising that, in those times, such unexpected success should be attributed to supernatural means. The English army was seen marching from its lines, and Joan prepared for a battle, but ordered the French troops not to attack, saying, "It is the holy Sabbath; if they choose to depart, it is the Divine will they should be permitted to go away; but if they attack you, defend yourselves valiantly, and fear not, for you shall be their masters." She directed that mass should be performed, and prostrated herself upon the ground. Another mass was sung, and she inquired whether the English still looked towards them. Being told they were looking the other way, she said, "Let them go, and let us thank God; we will not pursue them, as it is Sunday." Undoubtedly, on all occasions Joan manifested a high degree of religious feeling, but it was only according to the sort of instruction she had received. The particulars recorded of her fully show that she was more conscientious, and desirous of acting according to the light she possessed, than the ecclesiastics of her day. On one occasion she applied the term "Godon" to the English, a name derived from the profane oath, then, as in later days, common among the English nation, and which even savages have often applied to their reproach. Truly it may be said, "Because of swearing the land mourneth."

The English glory in France had now passed its meridian; and when we consider all the circumstances, we are surprised that the actions of Joan should have been imputed to the agency of Satan, and that she should have been falsely calumniated; but, at the time, all these imputations only rendered her the more an object of unfounded dread. Turner well says, "The deliverance of Orleans, however extraordinary, sudden, and unexpected, was but a splendid example of what enthusiasm can achieve." "If we pass beyond these considerations, to the providential dispositions of human events, we must be careful to make the distinction between an instrument used, and an agent commissioned."

The enthusiasm of Joan insisted on an advance to Rheims, that Charles might be crowned. She headed the storming of Jargeau, and the English fled panic-stricken from the field of Patay. Troyes, Chalons, and other places, submitted with little opposition. Charles approached Rheims with distrust, having no materials for a siege; but Joan boldly urged him onward, telling him to fear nothing. On July 16, he arrived before the town; the citizens invited him to enter: he was crowned on the following day, and supporters then hastened to him from every quarter. But, previous to his coronation, most of his nobles had stood aloof; few were present on that occasion; the most prominent character was Joan, who stood by the side of the monarch, holding her banner displayed.

Thus Joan had accomplished what she represented to be her mission, and it appears she was desirous of retiring to private life; but Charles still wished to avail himself of the excitement she had caused. After various military movements, an unsuccessful attack was made upon Paris, in which she was wounded. In December she was declared a noble, and continued to act as a military leader, though she failed in some of her attempts.

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Towards the end of May, 1430, being besieged in Compeigne, she headed a sally upon the besiegers. The French retreated, and were pursued; the commandant ordered the barriers to be closed, probably through alarm, though some have suggested that it was from envy, and Joan was taken prisoner by the Burgundians. The English and their allies rejoiced beyond measure at this success.

After some months spent in deliberations, Joan was given up to the English for a sum of money, and was tried according to the forms of the Inquisition, by a member of that tribunal and the bishop of Beauvais, who had recommended that she should be ransomed from her captors, that the church might be at liberty to dispose of her. Her answers to the interrogatories of these judges still remain, and disclose many interesting particulars of her early history, and throw light on the state of her mind. At the present time her sanity would be questioned, and she might be considered an object for restraint; but in that day she was condemned to be burned for witchcraft and sorcery. One circumstance, alleged as a proof of the especial influence of Satan, was her wearing the habit of a man, or rather the military garb. This she chose to do as best suited for the circumstances in which her fancied mission placed her. Her death was resolved upon, and the ecclesiastical censures presented the most plausible pretext for accomplishing this design. On May 30, 1431, Joan was cruelly burned at Rouen, with the mitre of the inquisition placed on her head, stigmatised as a heretic, apostate, and idolater. Thus perished the Maid of Orleans, when hardly twenty years of age; and her fate has left perpetual disgrace upon those who were the authors of her death.

(To be continued.)

THE COTTON MANUFACTURE.—No. I.

The material from which all cotton goods, such as calicos and muslins, are formed, is the produce of a plant called by botanists the gossypium. The word *cotton* is said to be derived from the Arabic, for it was probably in Arabia that it first came into use for the purpose of human clothing, and is there called *gotn* or *gootn*.

Dr. Ure has published, in his work on the cotton manufacture of Great Britain, a very interesting practical account of the cultivation of cotton, written by Mr. Spalding, of Sapelo, an island near Darien. According to this gentleman, the system of husbandry is altogether different from that formerly employed. The farmer was accustomed to sow his seed in hillocks, about five feet apart, in every direction. But it was soon found, that to obtain a good crop of this delicate plant, more seed was required. The ground is now formed into ridges, five feet in breadth. After every care in the sowing, the planter is never sure of obtaining a crop, for a single night's frost will destroy all his plants, and require a repetition of his labour. The cotton pods begin to open in the early part of August, and the attention of the planter is after that confined for four months to picking in the cotton as the pods daily open.

"This singular class of plants," says Dr. Ure, "has been largely distributed all over the torrid zone; a conspicuous gift of Providence to its inhabitants, destined to afford them, in its fleecy pods, a spontaneous and inexhaustible supply of the clothing material best adapted to screen their swarthy bodies from the scorching sun-beam, and to favour the cooling influence of the breeze, as well as cutaneous exhalation. While the tropical heats change the soft wool of the sheep into a harsh, scanty hair, unfit for clothing purposes, they cherish and ripen the vegetable wool, with its slender and more porous fibres, admirably suited to Southern, as the grosser and warmer animal fibres are to Northern India."

The cotton, as brought into this country, is not in the same state as when gathered from the tree. There are several processes required before it is fit for exportation. It is first exposed for a day or two upon the drying-floors, and when all moisture is evaporated, it undergoes a process called whipping, by which the loose sand and broken leaves are thrown off. The cotton is then passed through wooden rollers to separate the seed, and afterwards very carefully examined, and, when thoroughly cleaned, it is bagged, each bag containing about 300lbs. weight.

The manufacture of cotton goods has been traced back by some writers to a very early period. It has been said that

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the sons of Noah were clothed with it after the flood, but on what authority we are at a loss to imagine. It is a singular fact, that the ancient Egyptians appear to have been altogether unacquainted with it, for none of the bandages wrapped round the mummies are formed of that material, and we have no representation of the plant upon the tombs of Thebes, although the flax is there depicted in all stages of its growth. Linen was the only manufacture used by them, and even the kings wore it. The Greeks and Romans were also unaccustomed to the use of cotton fabrics, although several of their writers mention them incidentally as worn by the Hindoos. Herodotus relates the fact, and Strabo states, on the authority of Nearchus, the admiral of Alexander the Great, who sailed down the Indus, that the Indians wore printed cotton robes. Now, when we consider that the Jews, Greeks, and Romans, learned the art of manufacturing linen goods from the Egyptians, and also that there was an almost constant communication, though not a general one, between some of these people and the Hindoos, it must appear strange that they should have remained practically unacquainted with so valuable a manufacture. This may, however, be accounted for in reference to the Greeks and Romans, by the assertion of their historians, that the philosophers who flourished among them considered an application of mathematical and physical discoveries to the construction of machines for the ordinary operations of manufacture to be far beneath their notice, and, in fact, a misapplication of their talents. Had the mind of Archimedes, and other ancient philosophers, been directed to this subject, Rome and Athens might have been as celebrated for their manufactures as they have been for their wars and their scholastic discussions; but the inhabitants of both were essentially a warlike and vain-glorious people, who looked with contempt upon all who were engaged in pursuits unconnected with the art of war or political and philosophical discussions.

In Arrian's celebrated "Circumnavigation of the Erythrean Sea," a work to which we are in the present day almost entirely indebted for our knowledge of ancient commerce, there are frequent allusions to cotton goods. This writer lived either at the close of the first or commencement of the second century of the Christian era. The Erythrean Sea of the ancients was all that part of the ocean between the Red Sea and furthest India. Now, from Arrian's account, it appears that in his day the Arabs were accustomed to bring Indian cottons to Aduli, (a port in the Red Sea,) that Barygaza exported calicos, muslins, and other cotton goods; and that those manufactured at Bengal were then, as in more modern times, considered very superior to the manufactures of other places. At an early period of the Christian era, the manufacture of cotton goods was, in all probability, introduced into Egypt; but the trade resulting from it must have been unimportant, as we find no allusion to the use of cottons among the Romans, or the mention of any duty upon them. After being known in Asia for a period of thirteen hundred years, cotton was brought over the Mediterranean Sea into Greece and Italy. In the thirteenth century cotton was, amongst the Moors and Arabs, a common article of clothing in Spain. As early as the tenth century, Cordova and Grenada were celebrated for this article. In the year 1641, the manufacture was introduced into England, and a very few years after it was the staple article of trade in Manchester. At a much earlier period than this, cotton manufactures are mentioned, but the fabric in all these cases is supposed to have been a kind of woollen.

Fuller, in his "Worthies of England," written in 1662, refers to the cotton trade of Manchester, when mentioning Humphrey Chetham, the founder of the Blue Coat Hospital and Library at Manchester. "George, Humphrey, and Ralph Chetham, embarked in the trade for which Manchester had been for some time distinguished, the chief branch of which was the manufacture of cottons. Bolton, at that period, was no less the market for fustians, which were brought thither from all parts of the surrounding country. Of these last especially, the Chethams were the principal buyers, and the London market was chiefly supplied by them with those materials of apparel then in almost general use throughout the nation. Humphrey Chetham, when high sheriff of this county, 1436, discharged the place with great honour, insomuch that very

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good gentlemen of birth and estate did wear this cloth at the assize, to testify their unfeigned affection to him."

From this allusion we may learn that the trade, although yet in its infancy, was rising in importance. It would be a curious sight, in the present day, to witness gentlemen of birth and estate at an assize dressed in fustian, and would be no mark of respect to a sheriff who happened to be a manufacturer of that article. At the time to which we have referred, however, it could be only coming into use, and was probably an expensive article of dress.

The history of the cotton trade in this country is one of great interest, not only as presenting to our notice a series of curious and ingenious contrivances to overcome difficulties and diminish labour, but also as a practical illustration of the wonderful importance of a single branch of manufacture to the industry and wealth of a nation. It will be our object, in another paper, to follow the history of the cotton manufacture in England, and to explain, with as much perspicuity as the subject and the space that can be devoted to it will admit, the nature of the improvements in the machinery and fabrics which have been made at different times. But we should give a very imperfect account of the cotton trade, and its present interests, without a further account of those fabrics produced in British India, and some allusion to the Americans.

The discoverers of America found cotton goods among the Mexicans; indeed they used no other material in the manufacture of their clothing except the wool of rabbits and hares, known in commerce as coney's wool, and a fibrous plant called the magnei. The Abbe Clavigero, in his history of Mexico, says, that "of cotton the Mexicans made large webs, and as delicate and fine as those of Holland, which were with much reason highly esteemed in Europe. They wove their cloths of different figures and colours, representing different animals and flowers. Of feathers, interwoven with cotton, they made mantles and bed-curtains, carpets, gowns, and other things, not less soft than beautiful. With cotton also they interwove the finest hair of the belly of rabbits and hares, after having made and spun it into thread; of this they made most beautiful cloths, and in particular winter waistcoats for the lords." In another part the same author informs us, that among the presents sent by Cortes to Charles the Fifth, were cotton mantles, some all white, others mixed with white and black, or red, green, yellow, and blue; waistcoats, handkerchiefs, counterpanes, tapestries, and carpets of cotton.

For many years the trade of India in cotton goods was immense, and continued so till it was checked by the manufacture of England. Defoe, the celebrated author of "Robinson Crusoe," in his weekly journal, published in 1708, complains bitterly of the injury which had been done to the manufacturing industry at home by the importation of goods from India. "We saw," he says, "our persons of quality dressed in Indian carpets, which, but a few years before, their chamber-maids would have thought too ordinary for them; the chintzes were advanced from lying on their floors to their backs, from the foot-cloth to the petticoat, and even the queen herself at that time was pleased to appear in China and Japan, I mean China silks and calicos. Nor was this all, for it crept into our houses, our closets, and bed-chambers; curtains, cushions, chairs, and, at last, beds themselves were nothing but calicos or Indian stuffs; and, in short, almost every thing that used to be made of wool or silk, relating either to the dress of the women or the furniture of our houses, was supplied by the Indian trade." "Let any man," says the same author, "look into the cargoes exported and imported between 1697 and 1699, and he will find the account so surprising that a man hardly dare put it in print, there being exported in bullion only, beside goods, and by the companies, beside private trade, 7,157,372 ounces of plate, and the cargo home amounted in the hands of the retail detailers to above 7,000,000*l.* sterling; that several single ships brought home 200,000 pieces of goods at a time, directly interfering with our home manufactures, and, besides the humour of the times, being, on many accounts to be sold beyond all proportion cheaper than any thing could be made here."

Some of the Indian muslins are delicately beautiful. The natives of this country have always received the honour of "making cotton garments of extraordinary perfection;" and even now that the British manufactures have risen to such a remarkable perfection, they

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retain their superiority in this respect. The late Rev. William Ward, of Serampore, in his work on the "History, literature, and mythology of the Hindoos," informs us, that at Shantee-pooru and Dhaka, muslins are made which sell at a hundred rupees a-piece. Persons, with whom I have conversed on this subject, say, that at two places in Bengal, Sonarga, and Vicknum-pooru, muslins are made by a few families so fine, that four months are required to weave one piece, which sells at 400 or 500 rupees. When this muslin is laid on the grass, and the dew has fallen on it, it is no longer discernible.

Mr. Baines, in his work on the cotton manufacture, to which we are indebted for many facts, speaking of this and other passages, says, "After such statements as the above, from sober and creditable witnesses, the oriental hyperbole which designates the Dacca muslins as webs of woven wind, seems only moderately poetical."

In all parts of British India the cotton-tree may be found; and there are few towns or villages in which the manufacture is not going on. The Indians have no large manufactories; it is a domestic art in which almost every woman spends a portion of her time. The machinery they use is rude, and such as can be easily constructed. We have already alluded to the instrument used by the cotton grower in separating the cotton from the seeds; a similar but ruder instrument is employed by the Hindoo. Two rollers of teak wood, with five or six longitudinal grooves, are fixed in uprights, and are brought nearly into contact; the upper one is put in motion by a handle attached to it, and the lower by a perpetual screw at the axis. Through these rollers the cotton is passed, but the seeds which cannot enter the opening are torn off, and fall to the ground. The cotton being thus prepared, the process of bowing, which is similar to that adopted in hat making, is performed. The cotton being thus raised, is spun by the women; the coarse yarn on a heavy one-thread wheel of teak wood, and the fine on a metallic spindle, sometimes with, and sometimes without a distaff. The spindle is turned with the left hand, and the cotton is supplied with the right; the thread being wound on a small piece of wood. In this simple way, according to the evidence of Orme and other writers, the Indian women are able to produce a yarn finer and more tenacious, so acute is their sense of touch, than any spun by machines in this country.

AUTHENTICITY OF THE FOUR GOSPELS.

1. *Origin of the Gospels.*

Having established the authenticity of the five books of Moses, we now enter on a similar process of investigation in reference to the four Gospels. I take up the Gospels next to the Pentateuch, because, when the first five books of the Old Testament and the first four of the New are shown to be authentic, the process of proof in respect to the others may be made very brief and simple.

The four Gospels which we have, and these only, have always been acknowledged and quoted by Christians and heretics, Jews and pagans, as the authoritative books of the Christian church. Other Gospels have existed, and heretics have claimed for them equal or superior authority, to those which we regard as authentic; but it has never been pretended that the Christian church has acknowledged any other Gospels as canonical.

Almost uniformly they have been arranged in the same order in which we now have them. The most remarkable exceptions are, the famous Beza manuscript, preserved in the library of the university at Cambridge, and the old Gothic translation by Ulphilas; in both which the Gospel of St. John is placed immediately after that of Matthew. The order in which they are usually arranged, is most probably the order of time in which they were written.

According to the best circumstantial evidence that we can obtain, it seems that the apostles preached Christ, that is, they told their hearers who Christ was, what he had done, and taught, and suffered; and explained how upon the life and death of our Lord Jesus Christ, depended the salvation of mankind. As was customary in ancient times, when books were rare, and sold at an exorbitant price, many of their hearers took notes of their discourses, and sent copies of them to their friends. These notes, necessarily imperfect, without authority, written without the influence of Divine inspiration, and sometimes, perhaps, contradictory, were widely circulated. To prevent confusion and mistake, the evangelists were Divinely directed to write

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and publish authentic narratives, for the instruction of their contemporaries and posterity.

Luke refers to these prior accounts, which had been written and circulated, in chapter i. v. 1, of his Gospel: "Forasmuch as many have taken in hand to set forth in order," etc. *Many* cannot refer to Matthew and Mark, who had written before him; for two could hardly be styled "many;" and in ver. 4, Luke says he wrote, that the "certainty," respecting the Saviour might be known. Now, if Matthew and Mark had been referred to in the word "many," there would have been no need of writing another account, as they were credible and inspired writers as well as Luke.

II. *Original Mode of Publication.*

We have information respecting the original mode of publishing the New Testament, much more certain than we have in regard to the Old. In the age of the New Testament writers, the most common and convenient material of writing was papyrus, a sort of paper formed of the inner bark of a reed which abounds in Egypt, and flourishes also on the banks of the Tigris and Euphrates. Of this there were three kinds, the sacred, the common, and the epistolary. The first was very expensive, and its use limited principally to the pagan priesthood in Egypt. The epistolary was thin and perishable, but the common papyrus was more firm and durable, and this probably was the kind used by the writers of the New Testament. Paul in one passage speaks of parchment, 2 Tim. iv. 13.

Authors, at that period, seldom committed their own compositions to writing, and never for the use of the public. The preparation of manuscripts was then a trade, as much as printing and bookbinding are now. Paul usually did not write even his own epistles, Rom. xvi. 22; Gal. vi. 11; but, to prevent forgery, he wrote his own name with the concluding salutation, 1 Cor. xvi. 21; 2 Thess. iii. 17; Col. iv. 18. He urges it as a strong proof of his tender and deep interest in the Galatians, that he had written to them so large an epistle with his own hand, though the epistle itself is much shorter than that to the Romans, which was written by Tertius; and to the Thessalonians he writes, "the salutation of Paul with mine own hand, which is the token in every epistle, so I write."

The author usually dictated to one whose business it was to write rapidly, and who was denominated by the Greeks Ταχυγραφος, (*tachugraphos*,) *swift writer*, and by the Latins *notarius*, or *amanuensis*. This was copied in a fair character by the Καλλιγραφος, (*halligraphos*,) *fine writer*, called also Βιβλιογραφος, (*bibliographos*,) and by the Latins *librarius*. The manuscript was then submitted to one whose business it was to see whether the whole was accurately written, and to correct any errors which might have occurred.

The work thus prepared was dedicated to some one, as Josephus directed his writing to Epaphroditus, and Luke his to Theophilus; or to some body of men, as the epistles of Paul were generally directed to a church; or as Paul wrote to Timothy, to Titus, and to Philemon; and through these channels they were made known to the public. (Compare Hug's Introduction to the New Testament, vol. i., p. 106 ff. in German.)

III. *Canonical Authority.*

Those books and those only were regarded by the primitive Christians as of canonical authority, which were written by apostles, or by the companions of the apostles under apostolic superintendence. The question in regard to the canonical authority of any book, therefore, was a question of simple fact, upon which the churches at that time had every opportunity of forming a correct judgment. Most of the churches were personally acquainted with several of the apostles, and every one of the writers of the New Testament was personally known to many of the churches.

The churches from which the books of the New Testament proceeded, were situated around the shores of the Mediterranean Sea, from Egypt, through Palestine, Asia Minor, and Greece, to Italy; and through these countries, in consequence of the extensive military operations of the Roman empire, and the roads established for the convenience of the soldiery, and the glory of Rome, and the preservation of her power, communication was then easy and frequent. These churches were engaged in a great and common cause, in the prosecution of which they were obliged to encounter obloquy and persecution of the severest kind; and naturally they became strongly attached to each other, and the more intimately connected, the more they were

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separated from the rest of the world. Thus we find them relieving each other's necessities by charitable contributions, Acts xi. 29; 1 Cor. xvi. 1—3; 2 Cor. viii. 1; Gal. ii. 10. Ministers and church members travelling, were recommended by one church to another, Acts xviii. 27; Rom. xvi. 1, 2; 2 Cor. iii. 1; Col. iv. 10. Churches sent friendly salutations to one another, 2 Cor. xiii. 13; Phil. iv. 22. Apostolic writings were sent from one church to another, Col. iv. 16.

The churches, so intimately connected, so frequently visited by different apostles, and teachers, and church members, and continually sending their sacred writings from one to another, could not be deceived as to what were apostolic books, and what not. It would be perfectly easy to ascertain, in respect to any production, whether an apostle composed it or superintended its composition. If this were the case, the book was received as of canonical authority; if not, its claims to such authority were rejected.

It would have been impossible to impose upon these churches spurious books, as the writings of the apostles or apostolic men, during their lifetime, or the lifetime of the members of the churches who had been acquainted with them. Such deception, every one knows, would be impossible now. Deception would have been equally impossible then; for communication was then easy and frequent between the several places where churches were situated, and the connexion between the churches was still more intimate than it is now.

The canonical books were kept in a sacred depository in the churches, as the manuscript rolls of the Old Testament are still kept by the Jews in their synagogues; and they were read in course every Lord's-day, as a part of the regular religious service. Books written by those who were not apostles or apostolic men, as Clemens Romanus, Ignatius, Polycarp, and others, were also occasionally read in public on the Lord's-day, for the instruction of the congregation. But the reading of those books did not make a part of the regular religious service, they were not considered authoritative, nor were they allowed to be kept in the sacred receptacle.

The internal and circumstantial evidence confirms the judgment of the ancient churches respecting the canonical authority of these books.

1. The contents of the books agree in every respect with what we know from other sources concerning the history of those times; and nothing can be detected in them inconsistent with their claims to authenticity. They exhibit no marks of a later composition; and the characteristic peculiarities of style by which the several books are distinguished from each other, give evidence of their genuineness.

2. The dialect in which these books are written, is a convincing proof of their genuineness. They are written in a Hebraistic Greek, which was used only by Jews of the first century, and went entirely into disuse among all Christian writers before the close of the second century. These books, then, if they are forgeries, must have been forged during the lives of the men to whom they are ascribed, or immediately after their death; and it is utterly incredible that such forgeries should ever have gained general credit.

But we have abundant direct testimony to the genuineness and consequent canonical authority of these books.

1. These books are constantly quoted by Christian, heretical, and pagan writers, from the first century downward. These quotations are drawn out at length by Dr. Lardner, in his Credibility of the Gospel History; and a clear and concise view of them is given by Dr. Paley, in his Evidences of Christianity, chap. ix. sect. 1, to which I refer the reader.

2. Early in the second century, Tatian, an Assyrian Christian, a disciple of Justin Martyr, composed a Harmony of the four Gospels which we now have.

3. Early in the third century, catalogues of the sacred writings of the New Testament were made out; the oldest of which now extant is ascribed to Caius, a presbyter at Rome, and contains the four Gospels as we now have them.

During the same century, lived Origen, of Alexandria, the most learned, zealous, and indefatigable of all the fathers, who gives a catalogue of the writings of the New Testament, among which are the four Gospels. He is allegorizing, according to his manner, on the account of the falling down of the walls of Jericho, at the blowing of the trumpet, and applying the allegory, he says, "The first who blew the trumpet, was Matthew, then Mark, Luke, and

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John, among the evangelists. Peter did the same in two epistles, then James and Jude. John set up again the trumpet call, by his epistles and the Revelation, and Luke in Acts. But last came Paul, and battered down the whole with the fourteen blasts of his epistles." A little after, Eusebius, the historian, gives the same account, Eccles. Hist. iii. 25.

If we judge of these books only as we would of others, or even if we add to their evidence a demand of more, corresponding to their surpassing interest, can there be a doubt of their genuineness? Dr. Paley has pursued this argument with great skill and conclusiveness in his Evidences, chap. ix.; and as this is a book so common, and so easily accessible, it is not necessary here to go into that minuteness of historical investigation, by which the genuineness of the Pentateuch has been established.

IV. *Credibility of the Gospels.*

I do not here touch the question of the inspiration or Divine authority of the Gospels; but simply the credibility of the writers as men, as men either capable and honest, or incapable and dishonest. As evidence of their credibility we observe—

1. They were well qualified to give testimony respecting all the facts which they relate; for three of them, Matthew, Mark, and John, were eye-witnesses of the transactions which they record, and Luke made himself acquainted with the facts by a diligent investigation of the whole subject. Their manner of writing, and all that we know respecting them, proves that they were men of capacity and discernment sufficient to make them competent judges of the nature of all the circumstances which they relate.

2. They give every proof of the most perfect simplicity and honesty. They impartially narrate their own faults, and the faults of their brethren; when, persecuted and defamed as they were, it would be very natural for men in their situation to endeavour to palliate each other's failings. They expose all their weaknesses; when, if they had been impostors, it would have been greatly for their interest to have concealed them. They record, with singular fidelity, the severe rebukes which they received from their Master, for their timidity, forgetfulness, thoughtlessness, and unbelief. Compare Matt. xxvi. 40; Mark vi. 49—52; viii. 14—21; Luke xxiv. 25; and many other passages. What stronger proofs of honesty is it possible to require?

3. They changed their whole mode of life in consequence of their belief of the facts which they stated, and endured all manner of suffering, in attestation of their truth. They themselves certainly believed that those things of which they testified, had actually occurred; and these facts were of such a nature, and such were the circumstances of the case, that the witnesses could not have believed them, unless they had actually taken place.

4. If their statements had not been true, the falsehood could have been easily detected; for they were continually surrounded by bitter enemies who were ceaselessly watchful to seize upon every advantage to hinder their progress. The Jews from all parts of the world were continually coming to Judea, with full opportunity for learning every thing that occurred there, and for reporting it when they returned to their homes. But the principal facts of the Gospel history, instead of being denied, were admitted by its enemies; and Judas himself, who had been intimate with the disciples, enjoyed their confidence, and partaken in all their counsels, and who had every inducement to excuse his own baseness by alleging crime against Him whom he had betrayed, offered no such vindication of himself, but acknowledged that he had sinned and betrayed the innocent, and gave proof of the reality of his remorse, and the depth of his wretchedness, by violently destroying his own life. What stronger testimony can we have to the innocency of Jesus, and the integrity of the Gospel history?

5. It is impossible that the character of our blessed Lord should be a fiction, invented by such men as the writers of the New Testament. Their education, character, circumstances—every thing precludes the idea of their possessing either the ability or the inclination to conceive and delineate such a character, unless they had actually seen it exhibited before their eyes. Where, in that corrupt age, where, in all the history of the world, could they have found a model on which to form so grand, so perfect an idea? And if a model, or even the nucleus of such a character, had existed, how were poor,

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unlettered publicans and fishermen to learn the skill to fashion and exhibit it with such beauty and effect?

A character possessing every virtue, without any of the corresponding failings, towards which, in imperfect human nature, each virtue leans—courage without rashness, humility without meanness, dignity without arrogance, perseverance without obstinacy, affection without weakness—always acting in exact consistency, and never ruffled by anger or depressed by despair, in all the severe and aggravating trials through which he passed. How could they draw such a character except from the living Person? And who could this Person have been, if not He who came down from heaven? How short was his stay upon earth! especially as to his public life, and yet how glorious, how permanent the results! A world has been disenthralled, corrupting and debasing superstitions overthrown, men placed in circumstances of improvement by which they are continually advancing their social and public welfare. And now, nearly two thousand years after his death, while the human founders of religious systems of more recent origin have already lost their hold on the human mind, the influence of Jesus of Nazareth is yet strong and fresh, and more extensive and powerful than it has ever been before; still increasing and strengthening, and brightening, and evidently destined to go on till the affections of every human heart shall be gained, and every tongue shall confess him Lord! Has all this grown out of a fiction contrived by the poor fishermen of Galilee? Assuredly not.

6. A comparison of these books with the spurious gospels, and other similar writings of that and the subsequent period, sets the whole argument in the strongest possible light, and shows conclusively, that the received Gospels must have had an origin altogether different. The puerilities of those spurious books, their absurdities and contradictions, and their total destitution of all moral interest, throw additional lustre upon the dignity, the correctness, and the sublime moral tone and thrilling religious sentiment of the genuine writings of the New Testament.

Even the genuine writings of the leading Christian teachers who succeeded the apostles, as Clemens Romanus, Ignatius, Polycarp, and others, fall very far below the dignity, the intelligence, the strong practical sense, and the purity of religious feeling, everywhere so manifest in the writings of the New Testament. These writings, and all others which were not received as canonical, whether genuine and valuable or not, were by the primitive churches called apocryphal, *αποκρυφα*, (*apokrupha*,) *hidden* or *concealed*, because they were not regarded as authoritative, nor used in the public religious services, nor kept in the sacred depository. At present the term is generally used to designate a spurious book which claims a Divine authority that it does not possess, though some of the apocryphal writings of the Old Testament are authentic and valuable productions; as, for example, the First Book of Maccabees, and the Book of Jesus, son of Sirach.—*From C. E. Stowe.*

HARMONY OF GOD'S PROVIDENCE WITH THE SCRIPTURES.

All the conduct of God, in his providential government over his creatures, is expressive, and hath a language in it. None of the providences of God are without meaning, but are all instructive and significant; they exhibit the same uniform and glorious character that is held up in his word. The same purposes and designs, the same most perfect and excellent disposition, which are expressed in words in the Holy Scripture, are delineated and exemplified in facts in his providential government. The Divine character is described in words in the sacred oracles, and exhibited in facts in his providence and works, and the character itself is not less legible, nor its excellences less visible or conspicuous, in the latter than in the former. The real character, the general disposition of the Divine mind, is not less obvious in what he does than in what he says; nor could it easily be accounted for that it should be otherwise, while one great end of his word is to explain the reasons of his conduct, the rule of his providential government; and as the glory of God really appears in the perfect correspondence of his actual government with those laws of his kingdom which are taught us in his word, so every part of the Divine conduct towards intelligent creatures expresses the same general character which is marked out in the promises and threatenings of revelation.—*West.*

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THE QUAIL.

It will not, we think, be too much to assert, that all animals are subservient to the welfare of the human race. We admit, indeed, that there are multitudes between which and man there is no immediate relationship; they and he are, as it were, dissociated so far asunder, as to appear to have no possible connexion.

But before we conclude that man and the most insignificant creatures have no influence on each other, we should look at nature as making up a perfect whole, in which one part depends upon another, and from which no part can be removed; we shall then see that animals, deemed of little consequence as far as man is concerned, are made by our gracious Creator to bear upon his welfare, not indeed immediately, but through a series of other beings, forming a chain of intricate and subtle links which terminate at his threshold.

Many animals, however, are of such marked and immediate utility that no one can avoid perceiving it; without them, indeed, the lot of man on earth would be tenfold worse than his apostacy has made it, and no lines would fall to him in pleasant places. It is among quadrupeds, and birds, and fishes that these express gifts of Providence are chiefly to be found. The most valuable, however, are from the list of quadrupeds.

We scarcely need allude to the ox, the sheep, the horse, etc., as examples. Among the birds, one order is highly valuable, namely, *rasorial*, orgallinaceous; from it are derived the majority of such as afford a wholesome and nutritious food; and of such as man has reclaimed from a state of independence. This order comprehends the peacock, an aboriginal of India, whence it was brought as a gift to Solomon in the ships of Tarshish; the pheasant, an aboriginal of Independent Tartary, Georgia, Mingrelia, etc.; the guinea-fowl, originally from Africa; the turkey, an aboriginal of America; and the common fowl, originally from the plains of India. These may be regarded as in a state of domestication; but there are numerous species besides, which man has not reclaimed, but which are nevertheless of considerable importance. The grouse tribe, the partridge tribe, the quails, and many more stand in this position. In proportion to the utility of animals to man is the interest that attaches to their history. Hence, throughout the whole range of ornithology, no order has attracted so much notice as that of the *rasores;* nor is this interest diminished by the circumstance that many species are pre-eminent for beauty. Witness the peacock, and the common pheasant; the argus, the impeyan pheasant, and the horned pheasants of Nepal; the golden pheasant, and many more. The manners, however, of the most beautiful are not always the most engaging; and in the present instance more interest is connected with one of the smallest and plainest (or rather soberly coloured) of the rasorial group, than with the most gorgeous and stately. The bird to which we allude is the quail, *coturnix dactylisonans*. The quail is a bird of migratory habits, and possesses somewhat longer and more powerful wings than the genuine partridge, to which it is intimately allied. At fixed periods, spring and autumn, the quail changes its abode, and obeys the same laws that regulate the summer birds of passage, which visit our island and the central or more northern latitudes of the European and Asiatic continent. These migratory habits of the quail are the most remarkable, since it is not among gallinaceous birds that we look for such habits, nor do we find among them, in general, powers and instincts adapted accordingly. The species of the nearest allied genus to that of the quails, namely, that of the partridge, *perdix*, are strictly stationary, as are all the more typical of the rasorial order. In the *columbidæ*, or pigeon tribes, regarded by most naturalists as constituting one of the less genuine of the rasorial order, one remarkable and true example of migration has been long celebrated; we mean the turtle, *Columba turtur*. Linn. a granivorous bird which visits the southern districts of England early in May, and departs at the commencement of September.* The columbidæ, however, are noted for their great powers of flight, powers which do not obtain in the rasores generally. The motives which impel the swallow, and the nightingale, and the cuckoo to depart from our shores, when the insect myriads on which they exclusively depend for subsistence are swept away by the chilly breeze, can be readily appreciated; but with food in abundance around them, we cannot so

* The irregular wanderings of the great flocks of the passenger pigeon of America, and the movements of those of the turkey in quest of localities where food is plentiful, are not to be regarded as true migrations.

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readily say what may be the motives which impel the turtle and the quail to leave our latitudes, long before the setting in of winter. An impatience of cold, vital energies unsuited to autumnal breeze, and the chill of autumnal evenings, may be regarded as having some influence; but, after all, we have much to learn respecting the hidden causes of that great law of periodical migration by which so many of the feathered tribes are actuated. It is singular that the first mention made of the quail,—and this is made in the Book of Exodus,—signalizes it as a bird of passage. The Israelites having escaped the army of Pharaoh, by passing though the Red Sea, came into the wilderness betweeen Elim and Sinai, and there began to murmur for want of food,—"And the Lord spake unto Moses, saying, I have heard the murmurings of the children of Israel: speak unto them, saying, At even ye shall eat flesh, and in the morning ye shall be filled with bread; and ye shall know that I am the Lord your God. And it came to pass, that at even the *quails came up and covered the camp;* and in the morning the dew lay round about the host," Exod. xvi. 11—13. Afterwards, at a place subsequently to the event termed *Kibroth-hattaavah*, (the graves of lust,) the Israelites were again supplied with quails. The circumstance is recorded in the Book of Numb. ch. xi. 31—34. Still in the wilderness the Israelites again complained, and said, "Who shall give us flesh to eat?"—"Why came we forth out of Egypt?"—"And there went forth a wind from the Lord, and brought *quails* from the sea, and let them fall by the camp, as it were a day's journey on this side, and as it were a day's journey on the other side, round about the camp, and as it were two cubits high upon the face of the earth. And the people stood up all that day, and all that night, and all the next day, and they gathered the quails; he that gathered least gathered ten homers,* and they spread them all abroad for themselves round about the camp," Numb xi. 31, 32. To this miraculous interposition of the Almighty we shall again have occasion to refer.

Among the early heathen writers we find abundant allusions to the migrations of the quail, nor are the writings of the moderns without descriptions of the movements of this bird, and of the multitudes which at the times of migration congregate together. As in the case of all migrating birds, their line of direction is from the north to the south, and *vice versa*.

Africa seems to be the great winter abiding place of the quail; and it is across the Black Sea, the Mediterranean, and the Red Sea, that the vernal and autumnal flight of countless myriads of these birds is regularly made.

During their passage they rest on different islands, to some of which the ancients gave the name of *Ortygia*, from that circumstance, the Greek word for a quail being ορτυξ, ortyx.

M. Godeheu (see Memoirs de Mathematique et de Physique, &c., tome iii.) observes, that he has seen these birds continually passing to Malta in the month of May, carried by certain winds, and re-pass in the month of September. And Varro (de re rustica) gives an account of the arrival and departure of quails, which at these epochs were seen in prodigious multitudes on the isles of Pontia, Pandataria, and others bordering the southern part of Italy, where they were accustomed to rest during their migratory journeys. In fact, the periodical migrations of these birds, not singly, or in scattered flocks, but in extraordinary multitudes, have engaged the attention of persons living on the borders of the Mediterranean, from the earliest ages to the present. The island of Capri, in particular, forms a resting-place, to which those birds resort in such numbers that the bishop of the island is said to draw the chief part of his revenue from them: hence he is called, *Il Vescovio delle Quaglia*, the Quail Bishop. They also visit the environs of Pesaro on the Adriatic, and the western shores of Naples; and in the neighbourhood of Nettuno, within an area of four or five miles, 100,000 have been taken in a single day, and sold for a trifling sum per hundred, to be sent to Rome.

On the coast of Provence, and especially within the diocese of the Bishop of Frejus, which borders the sea, they also appear in vast flocks; and are at first so fatigued by their oversea journey as to suffer themselves to be taken by the hand.

According to Baron de Tott, no country abounds in quails more than the Crimea.

* A chomer, or homer was equal to eight bushels.

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At the approach of autumn, they assemble in vast flocks, and cross the Black Sea to the southern coast, whence they afterwards transport themselves into a warmer climate. "The order of this emigration is invariable. Towards the end of August, in a serene day, when the wind blows from the north at sunset, and promises a fine night, they repair to the strand, take their departure at six or seven in the evening, and have finished a journey of sixty leagues by break of day. Nets are spread on the opposite shore, and the birdcatchers waiting their arrival, take tithe of these emigrants as an esteemed food."

It is singular, that according to the account of Pliny, the Romans did not use them as food, accounting them unwholesome, in consequence of their feeding on the grains of the hellebore, and being subject to the falling sickness, or epilepsy. Yet fatted snails and dormice were regarded as luxuries.

In Portugal, which probably serves as a winter retreat to the flocks bred in the more northern provinces of Europe, vast multitudes take up their winter abode; and indeed the quail there may be regarded as a stationary rather than a migratory species.

In Sicily, however, which is parallel to the southern provinces, both of Spain and Portugal, it is strictly migratory, and the autumnal arrival of the flocks is looked for with great earnestness. As soon as they make their appearance, the shores are lined with persons all around, with fowling-pieces ready for the work of destruction; and the strait between the Sicilian and Italian shores is covered with boats filled with people, all bent upon the same pursuit.

After all, however, the migrating journeys of the quail are undertaken by short stages; for the birds are incapable of long continued flight. It is to be observed, too, that they are much aided by the wind, which if it become suddenly adverse, blows them out of their course, and often sweeps whole flocks into the sea; they have been known to settle in thousands on vessels, during the night; but we cannot agree with Pliny, that they have made the vessel sink,—a circumstance which he states to take place, and that not unfrequently.*

* Advolant ..... non sine periculo navigantium cum appropinquavere terris, guippe velis sæpe insident, et semper noctu, merquntque navigia.—Plin. Hist. Nat. lib. x. cap. xxiii.

It may not be uninteresting to trace out the course of that wind which brought such multitudes of quails to the Israelites, at Kibroth-hattaavah, and which the Almighty called up at that juncture for the special purpose of bringing food for the children of Israel.

We read, "There went forth a *wind* which brought *quails from the sea.*" Now the sea in question can be no other than that which the Israelites had crossed; namely, the Red Sea; and the place termed Kibroth-hattaavah could not be far from Mount Sinai. We have therefore the direction of the wind and the countries through which it passed. It was a south-east wind, sweeping Abyssinia, Nubia, Egypt, and the shores of Arabia, bordering the Red Sea, countries which may be regarded as the most abundant of all others in quails—in fact, as the rendezvous to which countless myriads throng, in order to take up their winter residence. The Psalmist says, "He caused an *east wind* to blow in the heaven: and by his power he brought in the *south wind.* He rained flesh upon them as dust, and feathered fowls like as the sand of the sea," Psa. lxxviii. 26, 27. We see, then, that the wind bore both from the east and from the south; that it swept the countries in which this migratory bird congregates in almost incredible multitudes, and from whence the flocks were winging their way to the borders of the Mediterranean, or to the Crimea; and that it carried them in an exhausted condition to the camps of the Israelites.

To proceed with our history of the quail.

The pugnacious habits of this bird, especially during the spring and summer, are well known. The Chinese keep them for the purpose of fighting, as did the ancient Greeks and Romans, who were delighted with their spirit and resolution. There is another purpose, however, for which they are used in China, namely, as hand-warmers; they are held in the hands, in order by their heat, to keep the fingers warm in winter.

The quail is very abundant in spring in our London markets, and is kept alive and fattened for the table. The supply is from France; and the mode of taking them is by a call made to imitate their peculiar whistle, which entices them under a net. "By this device," observes Mr. Selby, "males only are

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taken, which may account for the few female specimens to be found amongst the many hundreds kept in confinement by the London poulterers, and which are received from France."

In England the quail is not numerous, and its visits are said to be less frequent than formerly. Like the turkey, the species is polygamous, (such is the case also with the ruff,) and "the males are readily discovered by the whistling call-note they utter, and which is repeated thrice successively, after short intermissions." See Selby.

The female deposits her eggs on the ground in a slight hollow, lined with a few dried stalks, and generally in fields of wheat; the number of eggs is from six to seven or eight; in France and Italy, however, the number is said to amount to fifteen, and even twenty. The food of this bird consists of grain, seeds, berries, tender shoots of corn, and insects. Its flesh is excellent; we need not observe that the repugnance entertained by the ancient Romans against the use of it, was a ridiculous prejudice.

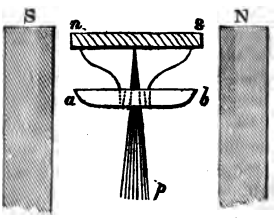
"As quarrelsome as quails in a cage," was a common saying among the ancients. We, however, have seen, and most of our readers have seen also, cages full of these birds in the shops of the London poulterers, contented prisoners, without the least disposition towards mutual hostilities; the pugnacious spirit most probably animates the males only, during the spring, when each arrogates an exclusive territory; or when in captivity they are kept separate. However this may be, when numbers are in a cage together, they agree very well.

Though not distinguished by brilliant colouring, the quail is a pretty bird, and the quiet, sober tints of different shades of brown, yellow, and white which mark its plumage, produce a very pleasing effect. The males are distinguished from the females by the presence of a black border round the throat, and in the general tints being darker; but they vary in this particular. The quail is considerably less than the partridge, but its figure is the same, being plump and round; its length is seven and a half inches.

W. M.

THE APPLICATION OF ELECTRO-MAGNETISM AS A MOVING POWER.—No. II.

Having explained, with some degree of particularity, the elementary principles of electro-magnetism, we may now attempt to describe the principle of those instruments proposed as electro-magnetic machines. Almost every month we are presented with new contrivances for the application of electro-magnetism as a moving power; but as the subject is as yet in its infancy, the effects already obtained are not adequate to those which are required. When a machine, intended to direct an almost unknown force, is newly invented, there will be a complexity of construction, which can only be removed by a constant study of its action, and by a practical acquaintance with the inconveniences it occasions. When the celebrated Watt first proposed his steam engine, it was difficult to make persons understand the mode of its operation, the agent and the machinery were together of so novel a character; but now, almost every one has had an opportunity of examining the machine in an improved form, and almost every one knows something of the manner in which its motion is produced. Electro-magnetism is, in the present day, an agent, as little known to general readers, as steam was a few years since. It would not, therefore, be a very easy task to describe in a clear and intelligible manner, any instrument in which it is employed as a moving force. We may, however, assist the reader, by explaining the one experiment on which every attempt yet made to apply electro-magnetism as a motive power is founded. The honour of inventing this experiment is due to the late Dr. Ritchie.



Let s and N represent the two ends, or poles, of a horse-shoe magnet, firmly fixed in a vertical position upon some heavy stand; *p* is a pillar which rises between them, and passes through a wooden cup, *a. b*, terminating in a point: *n*, *s*, is a cylinder of soft iron, round which is twisted several coils of insulated copper wire, that is, wire covered with silk. The extremities of the wires are pointed and brought down into

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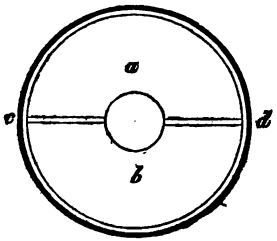
the cup, *a*, *b*, which is partly filled with mercury. The soft iron with its coils of wire, rotates on a fine point, as shown in the figure. The arrangement of the cup, upon which the success of the experiment depends, is represented in the following diagram.



The cup is divided into the two cells, *a* and *b*, by the partitions *c* and *d*, which do not rise to the edge of the cup. The pillar passes through the circle in the centre.

To perform the experiment.—Place some mercury in each of the cups, but taking care that it does not cover the partitions. The mercury in each cup is kept distinct from that in the other. Now when this has been done, it will be observed that the mercury wherever it may be in contact with the wood curves downwards, or, in other words, has a slight depression, so as to make the general level of the fluid higher than the edges of the partition. If, then, the two points terminating the wire that is bound round the soft iron be of such a length as to just pass over the partitions, they will when revolving, dip into the mercury, throughout the whole circuit, except when close to, or passing over the partitions.

Let the apparatus be now connected with a voltaic battery, (one pair of plates will be sufficient;) the wire from one end of the battery dipping into the mercury of one compartment, and the wire from the other end into the other. Immediately this is done, the soft iron is converted into an electro-magnet; for the points of the wire coiled round it dip into the mercury, and convey the electricity through the circuit thus formed.

It is evident, then, that two magnets are now in existence, and they will operate upon each other according to known laws—poles of the same name will repel, and poles of opposite names attract each other. To trace the action of the instrument, let us imagine the poles of the electro-magnet to be at right angles to the poles of the permanent magnet. An attractive power will be instantly called into operation; the north pole of the one and the south pole of the other will be drawn towards each other. But the polarity of the electro-magnet will be constantly changing as it revolves on its axis; for when the point dips into the mercury of one compartment, the pole with which it is united will be north, and when in the other, it will be south. The partitions separating the mercury are so placed, that the points leave the mercury just before the axis of the revolving magnet comes to the plane of the permanent magnet. The two poles are therefore attracted with an increasing force, until they come opposite to the poles of the permanent magnet, and then leaving the mercury, lose in a moment all their acquired power. But the revolving bar has a sufficient momentum to drive it over the partition, and immediately it dips into the mercury of the other compartment, it obtains magnetism again, but directly opposite to that which it had before; so that the poles which attracted now repel. By this incessant changing of the poles, a perpetual rotation is kept up.

If we have clearly explained the nature of this experiment, and the cause of the rotation of the voltaic magnet, the reader will have no difficulty in understanding how electro-magnetism may be applied to machines as a motive power.

The little apparatus we have just described, may, with a modification of form, be attached to models of saw-mills, pumps, and other machinery, and produce the effects required. The main object of the experimenter is now to develop the force in a sufficient amount to give activity to our large machines. Efforts, we might say hurried efforts, (so intense is the anxiety of all electricians to accomplish the object,) are now making in almost all countries, to carry out the application of this force; and it will not, we think, be long before success will attend some of their efforts.

Much interest has been excited in this country by a report of the experiments made in America. A gentleman in that country, in a communication addressed to a public journal, gives the following account of the discovery, as it is called:—"You are doubtless aware, that means

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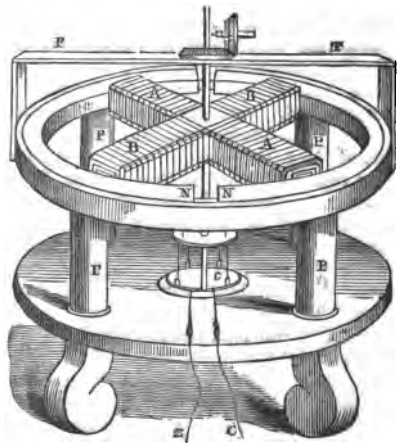
of obtaining a rotatory motion by electro-magnets have been found by several philosophers in Europe and in this country; but it is only within a year or two that any prospect has appeared, of successfully employing the full energies of this gigantic power in driving large machinery. The fortunate individual, whose patience and sagacity are apparently destined to obtain for him the honour of this success, is a blacksmith named Davenport. Two or three years ago his curiosity was excited, by reading a newspaper account of a large electro-magnet, and he immediately devoted himself to study and experiment, for the purpose of obtaining a rotatory motion, which had then been accomplished, on a very small scale, by one or two others, although he did not know it. After some months of application, he succeeded, and last year presented himself before the public, as the inventor and maker of a small machine, only about ten inches square, in which a wheel was to revolve with vast rapidity, and a power equal to raising a weight of twenty-four pounds. But then the question arose, whether the power could be augmented by enlarging the apparatus. The general impression among scientific men was that it could not. Mr. Davenport went on, however, with his experiments, amid many discouragements, and within a few days has completed another machine, only twelve inches square, which not only exerts a rotatory power of two hundred and forty pounds, or equal to that of two horses, but is believed to establish the principle, that the power can be augmented indefinitely, and applied to any species of machine. Mr. Davenport himself is confident, that electro-magnetism is soon to supplant steam, in propelling vessels, and in all kinds of manufacture to which steam is now applied."

In this opinion we coincide; but if the model which has been shown to us as his invention, be a representation of that which is spoken of above, we do not believe that it will ever be accomplished by an enlargement of his apparatus.

In a recent number of an American philosophical journal, a particular account is given of Mr. Davenport's machines, of which there are now two kinds; one consisting of electro-magnets revolving within permanent magnets; the other of electro-magnets altogether, both the fixed and revolving members being formed of them. To assist the reader in understanding the arrangement of the apparatus, the following sketch, taken from the model sent, with the specification, to the Patent Office, may be introduced.



N, N, are the ends of two semi-circular magnets, supported on wooden pillars, F. The moving part is composed of two soft iron bars, A, B, crossing each other at right angles. Round these a copper wire, covered with silk, is wound, the terminations of the wire being brought into the mercury cup, which is separated into two parts, as described in a previous article. With the mercury flood the battery is connected, by the wires z and c, and the poles of the cross bars are continually changing during revolution; being, when on one side north, and on the other south, according as the wire is receiving positive or negative electricity from the battery. The cross pieces are, as shown in the drawing, supported by a vertical axis, the lower end standing with its pivot in a socket, in the centre of the mercury cup, c the other being sustained by the frame F, F. As soon as the instrument is brought into connexion with a small voltaic battery, the cross bars begin to revolve. Now, supposing a horizontal cog-wheel to be placed at the top of the axis or spindle, and to fit another and larger one in a vertical position, we should have a means of raising weights, for as the vertical or upright wheel turned round, it would wind a rope round its axis, and raise

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the weight attached to the end. The cross bars of the instrument seen by Professor Siliman, were only five and a half inches long.

"As soon as the small battery," says the Professor, "destined to generate the power, is properly connected with the machine, and duly excited by diluted acid, the motion begins, by the horizontal movement of the iron cross. By the galvanic connexion, these cross bars, and their connected segments, are magnetized, acquiring north and south polarity at their opposite ends, and, being thus subjected to the attracting and repelling force of the circular fixed magnets, a rapid horizontal movement is produced, at the rate of two hundred or three hundred revolutions in a minute, when the small battery was used, and over six hundred with one of large size. The rope was wound up with a weight of fourteen pounds attached, and twenty-eight pounds were lifted from the floor. The movement is instantly stopped by breaking the connexion with the battery, and then reversed by simply interchanging the connexion of the wires of the battery with those of the machine, when it becomes equally rapid in the opposite direction."

Here is a philosophical instrument acting with great precision, and producing a certain effect, that is to say, lifting a weight of fourteen pounds. Electro-magnetism, then, is a prime mover; we have evidence of this in what has already been done; but a question arises whether the power admits of indefinite increase. Or, in other words, whether we shall ever be able, by increasing the size of the magnets, and giving to them a greater degree of power, to obtain the same results as are produced by the steam engine.

An electro-magnet is capable of such an increase of power, that we may almost assert that it has no limit. A bar of soft iron has not, as every one knows, any attractive power, nor will it point north and south, when delicately suspended, like a magnet. But if that bar of soft iron be bound with copper wire covered with silk, and a current of electricity be sent through the wire, by connecting it with a galvanic battery, the soft iron will be converted into a magnet. Let it be supposed that the electro-magnet thus formed, will carry a pound with one battery, it may carry two with another. But without changing the battery, let more wire be added, or arranged in a particular manner, and the power will be increased; so that at last the iron which carried only one pound, may be made to support many hundred weight. Permanent magnetism, which can only be communicated to steel, cannot be thus augmented; but on the other hand, it is constantly becoming weaker; and especially so when near a revolving electro-magnet. The conclusion to be drawn from these statements is, that both the fixed and moving parts of the machine should be electro-magnets, "and then," says Professor Siliman, "there is every reason to believe that the relative equality of the two, and of course their relative energy, may be permanently supported, and even carried to an extent much greater than has hitherto been attained."

Mr. Davenport has adopted an arrangement of the kind we have attempted to describe, and has succeeded in putting some machinery in action, with electro-magnetism as the moving power. In a letter recently addressed to a philosophical periodical, Mr. Davenport states that he has two instruments of sufficient power to drill to the size of one-fourth of an inch, iron and steel, and one which turns hard wood of three inches in diameter. In America, an electro-magnetic association has been formed, and Mr. Davenport has been engaged to construct a machine of about two tons power. It is now nearly completed, and consists of two hundred and thirty-four small magnets, weighing about four pounds each, ranged on a shaft six feet in length, with a corresponding number fixed.

DESPOND NOT.

Despond not in spirit, as touching the conversion of the vilest and most wretched, whether they are relations or others. God can, and in his due time will, make them throw down their weapons of rebellion, if they do belong to the election of grace. Barren sinners may become fruitful saints. The Lord can turn lions into lambs. Matthew, the publican, becomes an evangelist, and Saul of Tarsus an apostle of Christ. Brutish Corinthians are "washed, sanctified, and justified in the name of the Lord Jesus, and by the Spirit of our God," 1 Cor. vi. 11.—*Crane.*

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JUNE FLOWERS AND PLANTS.

Plants in Blossom.

WILD.

Forget-me-Not, *Myosotis palustris*
Bank hawkweed, *Hieracium pilosella*
Buck bean, *Menyanthes trifoliata*
Water flag, *Iris pseudacorus*
Hound's tongue, *Cynoglossum officinale*
Spearwort, *Ranunculus flammula*
Bird's-foot trefoil, *Lotus corniculatus*
Bee orchis, *Ophrys apifera*
Meadow cranesbill, *Geranium pratense*
Bitter sweet, *Solanum Dulcamara*
Buck thorn, *Rhamnus catharticus*
Dog rose, *Rosa canina*
Mullein, *Verbascum thapsus*
Musk thistle, *Carduus nutans*
Spear thistle, *Carduus lanceolatus*
Milk thistle, *Carduus Marianus*
Nipple wort, *Lapsana communis*
Ladies' bedstraw, *Gallium verum*
Wild thyme, *Thymus serpyllum*
Goat's beard, *Tragopogon pratense*
St. John's wort, *Hypericum perforatum*
Wood loose strife, *Lysimachia Nemorum*
Spindle tree, *Euonymus Europeus*
Dog wood, *Cornus sanguinea.*

CULTIVATED.

Rye, *Secale cereale*
Fraxinella, *Dictamnus albus*
Borage, *Borago officinalis*
Day lily, *Hemerocallis flava*
Jasmine, *Jasminum officinale*
Hollyhock, *Althea rosea*
Greek valerian, *Polemonium cæruleum*
Dwarf larkspur, *Delphinium Ajacis*
Turkscap lily, *Lilium pomponium*
Provins rose, *Rosa provincialis*
Gueldres Rose, *Viburnum Opulus*
Garden pink, *Dianthus hortensis*
Sweet William, *Dianthus barbatus*
Pansy, *Viola tricolor*
Garden poppy, *Papaver somniferum*
Canterbury bell, *Campanula media*
Rose campion, *Agrostemma coronaria*
American bindweed, *Convolvulus tricolor*
Candy tuft, *Iberis umbellata*
White lily, *Lilium candidum*
Maiden pink, *Dianthus deltoides*
Thrift, *Statice armeria*
Carnation poppy, *Papaver Rhœas*
Yellow Rose, *Rosa lutea.*

As May is characterized by flowers, June is peculiarly the month of leaves; and hence Coleridge happily calls it the "leafy month," in the fine description of the ship, whose sails made "a pleasant noise,"

> "The noise as of a hidden brook,
> In the leafy month of June,
> That to the silent woods all night
> Singeth a quiet tune."—ANCT. MARINER.

There is a very remarkable difference in the leafing of our shrubs and trees. Some, like the elder, *Sambucus nigra*, showing leaf as early as January, others, as the gooseberry, *Ribes grossularia*, about the beginning of March; others, as the oak, *Quercus robur*, not till May, while the acacia, or locust tree, *Robinia pseud-acacia*, is not in full leaf until about the beginning of June. A similar difference as to time is observable in the blowing of flowers, a circumstance which is one of the wonders of the creation, little noticed, because of common occurrence; though it ought not to be overlooked on account of its being familiar, since it would be as difficult to be explained as the most stupendous phenomenon of nature.

The blowing of the two sorts of crocus, the vernal and the autumnal, which differ so remarkably in their time of blowing, though botanically they are only varieties of the same species, is thus piously alluded to by a poet,

> Say, what impels, amidst surrounding snow
> Congeal'd, the crocus' flamy bud to glow?
> Say, what retards, amidst the summer's blaze
> The' autumnal bulb, till pale declining days?
> The God of seasons, whose pervading power
> Controls the sun, or sheds the fleecy shower,
> He bids each flower his quickening word obey;
> Or to each lingering bloom enjoins delay.
> WHITE.

The wild plants which are in blow in the greatest profusion in the fields, are the various species of grass, as well as the cultivated species of corn, which botanists rank among the grasses.

Those who have paid no attention to botany may wonder when we tell them, that grass has a flower no less complete in its several parts than a rose or a lily; but so it is. The young botanist, on taking up a spike or panicle of grass may be disappointed in the expectation of distinguishing the several parts of the flower, as the flower may not be quite expanded. When it is in full blow, the

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chaff will be found to be double, the outer or flower cup (*calyx*) consisting of two leaflets, one large and bluntly oval, the other smaller and flat; the inner or corolla also consisting of two parts or petals.

In every species of grass and corn there is a simple unbranched stem, straight, hollow, and jointed or knotted at certain intervals. At each of the joints a single leaf surrounds or sheaths the stem to some distance, and then spreads out into a long narrow surface of equal breadth, all the way till it approaches the end, when it invariably narrows off to a point.

The cat's-tail grass, *Phleum pratense*, is one of the most common, and may be found in various soils and situations, and assuming in consequence a considerable difference of appearance. In moist meadows, the spike is sometimes four inches in length, while in dry, poor soils it is often not more than half an inch, or even less. On the tops of walls, where it may occasionally be seen, or on dry, barren heaths, the stem, instead of rising upright, is procumbent, while the roots, instead of being fibrous, and spreading freely, grow knotty and jointed, like those of couch-grass, *Triticum repens*. If this dwarfed, knotty-rooted grass be transplanted from the wall top, or the heath, into the rich deep soil of a garden, the stem will become erect and tall, and the spike will, in the following season, be from six to eight times longer.

The thistle, by the way-side, though a troublesome weed in cultivated ground, is not without considerable interest to the botanist, while it furnishes the subject of allusions to the moralist. The flowers are aggregate, or compound, like those of the daisy, described on page 187 of the "Visitor" for May last; but the flowers of the thistle are different in form from those of the daisy. One of the circumstances worthy of attention, as connected with the thistle, is, that it is eaten by the ass, even apparently in preference to any other herbage, which we might imagine to be more palatable as provender. One reason of this may be found, perhaps, in the structure of the papillæ of the ass's tongue, or the thickness of the cuticle that covers them, which require the stimulus of the prickles of the thistle, in the same way as peacocks are fond of cayenne, and we of pepper and horse-radish. Goats in this way will eat the shoots of gooseberry bushes, and deer will eat the prickly furze, and the still more prickly holly. Dr. Darwin observed that the lower branches of the holly trees in Sherwood forest put forth prickles, while the high branches were clothed with leaves without prickles; and he fancied these prickles would save the lower branches from the depredations of the deer; but deer will eat the prickly as well as the smooth leaves. The thistle is fed upon by a great number of insects, particularly by one of our largest and most beautiful butterflies, called by collectors the painted lady, *Cynthia Cardui*. Thistles are not, therefore, so useless as at first sight they may appear to be, but form a link in the great chain of the creation.

Some botanists have puzzled themselves to ascertain which of the several species of thistles is the national plant in the royal arms of Scotland. Some suppose it to be the cotton thistle, *Onopordon Acanthium*, though it does not appear to us how this could well be, as the cotton thistle is not, we believe, a native of Scotland, or if it is, it is very uncommon; yet it is kept in many gardens in the north, and shown as the true Scots thistle. The plant usually shown in English gardens as the Scots emblem is the milk thistle, *Carduus Marianus*, whose leaves are irregularly blotched with white, as if milk had been spilled upon them. The Romish legends, indeed, state that this was actually caused by some of the milk of the Virgin Mary having fallen by accident on one of those thistles, and that ever after all the species exhibited the marks of the spilled milk. This species is a native of Scotland, as we have ourselves occasionally found it wild there, though it is by no means so common as it is in some parts of England. It is not at all likely, that so uncommon a plant should have been chosen as a national emblem; besides it does not much resemble the thistles usually figured in the Scottish arms, which are greatly more like the common spear thistle, *C. lanceolata*, and still more like the musk thistle, *C. nutans*, a very abundant plant in some parts of Scotland, as around Edinburgh and Glasgow. The truth seems to be, that we may as well try to find the living prototype of the unicorn in the royal arms, as the national species of the thistle, which is a heraldric, and not a botanical species. It would, in our opinion, be no less vain to inquire which is the true bo-

tanical species of the English rose, or the Irish shamrock, or the French fleur-de-lis.

The goat's-beard, *Tragopogon pratense*, is another plant with aggregate flowers, which is not uncommon on ditch-banks and in pastures, though it is seldom found in great numbers in one spot. This plant is remarkable for the circumstance of the flowers shutting up about noon; and hence it is often provincially called Go-to-bed-at-noon. Flowers of various species shut up at various times of the day, pretty regularly about the same hour, opening with equal regularity; though this sometimes depends on the state of the weather, for such flowers as the pimpernel, *Anagallis arvensis*, do not open at all in moist, cloudy weather; and hence the open or shut state of these flowers is deemed a very good natural hygrometer to indicate the weather for the day. Venus' looking-glass, a common garden annual, is another flower similar in this respect to the pimpernel.

Not only flowers, but leaves also have their daily periods of changing their expansion, as may be observed in the leaves of the acacia, and of the scarlet-runner, *Phaseolus multiflorus*; the leafits of the leaves closing up and partially drooping, much in the same way as the leaves of the sensitive plant do when it is touched. The mechanism, by which these changes are effected, has occasionally engaged the attention of scientific men; but they have found it too difficult to arrive at satisfactory conclusions, so far do the contrivances of Divine wisdom exceed the ingenuity of man—"It is past finding out."

Amongst the chief beauties of the garden this month, are the lily and the rose—the queen of flowers—which is yearly gaining more favour among florists, in proportion to the varieties, now amounting to above one thousand, that have been produced by cultivation. The changes are in the colours, in the form, and in the sizes, and in the multiplicity of petals. Linnæus and his followers are of opinion, that all double flowers ought to be considered as monsters; but the term is surely unhappy, for whatever is monstrous is calculated to excite disagreeable rather than pleasant feelings; and yet there can be no doubt that double flowers, and particularly double roses, are more beautiful than single ones; of which the common double moss-rose is a well-known example.

The wild rose, unaltered by cultivation, has only five petals, with a great number of stamens, and their yellow anthers filling the space between the base of the petals and the pistil. In the double roses, on the other hand, instead of five petals, the number of petals is indefinite; these occupying the place where the stamens are situate in the single rose. The common cabbage rose has been called the hundred-leaved rose from the time of Pliny, nearly two thousand years ago, till the present time, on the supposition apparently of there being a hundred petals in each rose. It is not known among gardeners what is the cause of the multiplication of the petals in double roses, and other double flowers; but all double flowers are at first procured from seed, and never, so far as is known, from cultivating the roots of single flowering varieties, by manuring them highly and the like; though, on the contrary, double flowering plants sometimes come to blow single by being grown in poor soil, or neglected to be transplanted, which is indispensable to keep roses in the best state for flowering.

The most uncommon colour among roses is yellow, though the yellow roses are not varieties but distinct species, which besides are so difficult to manage in our climate, that they do not usually blossom well, and this only when attended to with great horticultural skill. Neither this nor any of the sorts of roses thrive well near towns, probably on account of the smoke.

Roses differ almost as much in smell as in colour; some of them possessing their peculiar odour in a high degree, while others have it so faintly as scarcely to be distinguishable. It is the petals of the rose which give off the fine aroma, while in many other flowers the petals are scentless, and the odour arises from the anthers or the nectaries. If we do not greatly mistake, this is the case with the white lily, as well as with the poet's lily, *Narcissus poeticus*, which blows in May, and is the sort usually called the white lily in Scotland. The tall white lily, *Lilium candidum* of the English gardens, has a blossom in form of the orange lily, with petals as large, or larger, while the anthers are large, and of a golden-yellow colour. The scent of this lily is very agreeable, but it is apt to be too powerful for persons of a weak and nervous temperament, in whom it often gives rise to headachs.

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The nature of the scent of flowers is not well understood, though it must arise from very minute particles diffused from the flower through the air, and thence conveyed to the organ of smell. Chemists have attempted, but hitherto without success, to make some investigation of the constituents of aroma. The extreme fineness of the particles is proved by the fact, that a piece of musk which has been for years diffusing its aroma, does not sensibly lose any thing considerable of its weight.

One of the most universally cultivated garden flowers in bloom this month is the Greek valerian, *Polemonium coeruleum*, very often called Jacob's ladder, probably from the regular ladder-like steps of the winged leaves. It is a native of this country, but is rarely to be met with in a wild state, no doubt because when it is found, the roots are so frequently transplanted into gardens. We once found it growing below the rock called the Lover's Leap, near Buxton, in Derbyshire, the flower being of a colour which we have never seen in gardens; namely, a rich purplish blue, somewhat like that of the sweet violet, but not quite so dark; whereas the garden varieties are more purely blue, without any shade of purple, though they vary much in the depth of the colour; and some are pure white. In the same way the columbine, *Aquilegia vulgaris*, of which we once found a large patch growing wild in Ireland, near Cork, was of a colour between yellow and white, which we have never observed in the garden varieties, though they are very much disposed to vary in colour. The greater uniformity in the colours of wild flowers, as well as of wild animals, is a very remarkable circumstance; but the illustration thereof would lead us beyond the space which we can at present afford. J. R.

OSTRICH EGGS.

It has been thought that the ostrich, after depositing its eggs in the sand, this remarkable bird generally leaves them to be hatched by the genial rays of the sun; but the following facts will show the erroneousness of such an opinion, although maintained by some who have confidently assumed the character of historians.

"On approaching the nest," says the Rev. J. Broadbent, "we saw the female ostrich sitting upon it; and though she had been disturbed before by the Hottentot, she remained till we were very near, and then ran off at the report of two guns which were fired. The ground was sandy for several miles round, and covered with thinly scattered bushes. There lay a great number of loose ostrich feathers about the nest, which appeared to have come off the female while sitting, and she had the naked appearance which domestic fowls have at such times.

"The eggs were forty-two in number, including two which had been taken away, and were arranged with great apparent exactness. Sixteen were close together in the middle of the nest; and on these the ostrich was sitting when we arrived; they were as many as she could cover. The remaining twenty-six were placed very uniformly in a circle, about three or four feet from those in the middle. The eggs which were in the circle we found to be quite fresh, at which I expressed my surprise. The Hottentot informed me that these had been provided by the ostrich against the hatching of those in the middle, when she would break them, one after another, and give them to her young ones for food; and that by the time they were all disposed of in this manner, the young ostriches would be able to go abroad with their mother, and provide for themselves such things as the desert afforded. This fact affords as fine an instance of animal instinct, and as striking an illustration of a superintending Providence, as perhaps the whole circle of natural history is capable of furnishing.

"During the time that we continued beside the nest, which must have been near an hour, for the Hottentots kindled a fire, and broiled some of the eggs, the ostrich remained at a short distance, looking towards us; and there we left her. The eggs weighed three pounds each, and measured seventeen inches in circumference. We took the greater part of the fresh ones. Seven were as many as I could conveniently carry. One of the Hottentots ingeniously contrived to carry a great number, by pulling off his trowsers, tying up one end, and filling them with eggs."—*Kay's Caffraria.*

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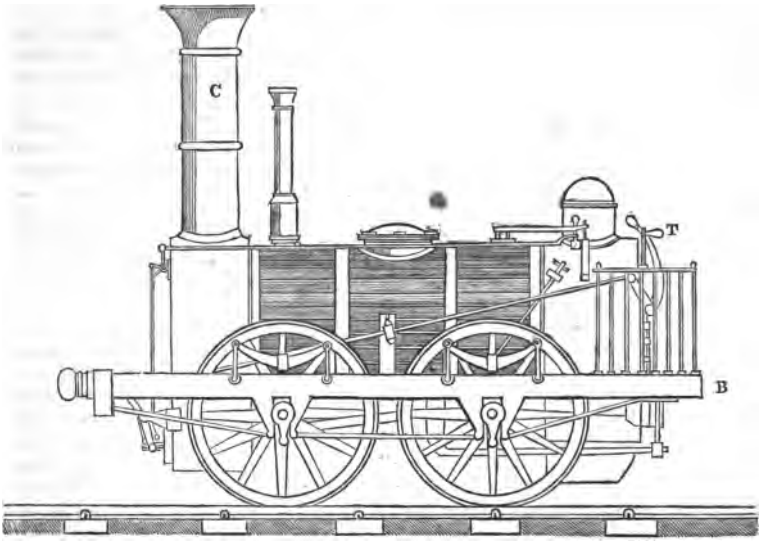

THE INTERNAL COMMUNICATIONS OF GREAT BRITAIN.

RAILROADS.—No. III.

At the time of the introduction of canals into Great Britain, rail-roads were in a state of relative insignificance, compared with the character which they at present assume. They have, however, been progressively improving; and, since the application of steam power to drag the carriages upon them, they have attained such value, as to entitle them to the most serious attention of the public.

The idea of forming smooth surfaces for carriage wheels to roll upon, is not of modern origin; but no horse could draw with advantage on a smooth pavement; hence, in Florence, where the wheel-tracks are paved with hard marble, wrought smooth and level, the horse-paths are of ordinary paving.

At an early period, a similar advantage was obtained in our own country, at the collieries of Newcastle, by putting down rails of hard wood for the wheels of wagons to run upon; and more recently rails of cast-iron have been employed, and with more advantage, being much harder and more durable than even the marble wheel-tracks of the Italians.

By using iron, we obtain a smooth, hard, and even surface, at an expense comparatively small, and the moving power has very little more than the friction of the axis to contend against. A carriage moving under such circumstances, bears the nearest analogy to a body impelled on the smooth surface of ice, where it is well known that the velocity which may be given by a small power is immense; what the rails want in smoothness, being compensated for by the use of wheels. These important advantages of rail-roads were foreseen some years ago, by Dr. Thomas Young; for he concludes his notice of them in these remarkable words:—"It is possible that roads paved with iron may hereafter be employed for the purpose of expeditious travelling, since there is scarcely any resistance to be overcome, except that of the air, and such roads allow the velocity to be increased almost without limit."

Speed and certainty of conveyance are of such primary importance in commerce, that a small increase of expense to obtain them is not a material object. Also the certainty of supply must tend much to diminish the fluctuation of prices, and remove those alternations of glut and scarcity which are perpetually occurring in the markets, from contrary winds, frosts, floods, etc. Every thing which tends to render the conveyance of goods certain, must lessen their

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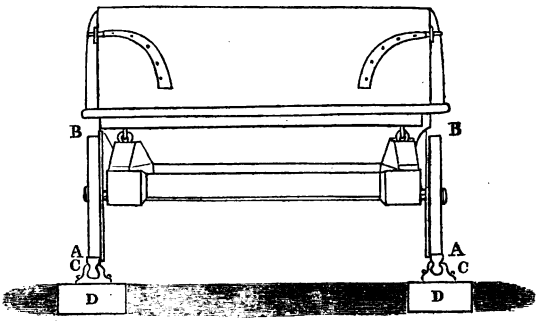
expense to the consumer, by diminishing the amount of dormant capital, and the necessity of keeping large stores in expensive warehouses. Also with a good system of conveyance, when a sudden call does take place, the whole stock of the country becomes available.

A cheap and regular mode of conveyance, besides rendering the produce of fertile lands accessible at a less price to any portion of the community, also affords new markets for other articles. It creates new sources of exchange and supply, and causes the advantage of labour and industry to spread; and it expels the idleness and indifference which engraft themselves among those people who, without such means, barely obtain the common necessaries of life. The ordinary mode of land-carriage makes every heavy commodity so expensive, that the inhabitants of inland districts are denied the use of many things. In many places they are nearly destitute of fuel, and while moderate exertion gives them the scanty supply of comforts within their reach, their utmost efforts scarcely do more, and, therefore, they sink into that languid state of indifference, which we find so generally prevalent in such countries.

The first rail-ways appear to have been used in the neighbourhood of Newcastle-upon-Tyne, about 1680; the rails were of wood, resting upon wooden transverse beams, called sleepers. The wooden rails are, however, now abandoned for iron ones, of which there are an immense number branching in various directions, from both sides of the Tyne, to the various coal works. The rails employed are now all of the kind called edge rails; and it appears from experiments, that on the level rails, when they are in good condition, a force of one pound will draw a weight of one hundred and seventy pounds, or one horse will draw twenty-five thousand five hundred pounds' weight, including the weight of the wagon, at the rate of two miles and a half per hour. The immense advantages of railways at Newcastle, soon caused them to be spread to the mining districts of Yorkshire, Derbyshire, Wales, and Scotland; and are now rapidly extending them over the United Kingdom, for the general purposes of trade.

The Surrey rail, or tram road, which commences on the north bank of the Thames, near Wandsworth, in Surrey, proceeds in a south-easterly direction to Croydon, and from thence to Merstham, making a total of about eighteen miles, was constructed in the beginning of the present century, about the year 1805.

There are two kinds of railways in common use. The most extensively adopted plan being what are termed edge railroads, which are adapted for the use of carriages with guiding flanges (or shoulders) on their wheels, as shown in the annexed cut; where A A represent an end view of the rails resting in their supports; C C called chairs, which are fastened to stone blocks, D D, imbedded in the ground; and B B represent the wheels of the carriage as seen end-ways.



The next kind differs from the above, in having the guiding flanges (or shoulders) upon the rails instead of upon the wheels of the carriages; it gives the advantage of employing carriages that can be used where there are

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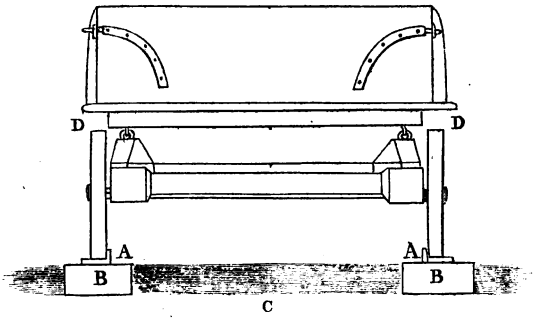
not rails laid down. Railways of this kind are called *tram roads*. The annexed cut represents these rails, where A A is an end view of the rails fastened down to large and heavy blocks of stone B B; having the space C tightly filled with earth; D D represents the wheels of the carriage as seen end-ways,



It is necessary that a line of railway should be as nearly level for its whole length as the circumstances of the country will admit of, and therefore it frequently happens that railways are made very circuitous, to wind round hills, and avoid deep valleys. When, however, these natural difficulties cannot be avoided, they are boldly encountered; and there are railway works now in progress, where to produce a level, or nearly so, an immense slice has been cut out of a hill for its whole breadth, sixty, eighty, and even a hundred feet deep; the earth thus removed has then been carried to fill up some distant valley to the required height; so that travellers passing along these great lines of railway, will be, for a few seconds, at the bottom of an immense excavation, and, before they can cast their eyes upon the strata of earth cut through, they will find themselves on the top of a high embankment, moving in the air with astonishing velocity, the whole country stretched before them like a map: houses, plantations, woods, farms, villages, and all the varied scenes of agricultural life, passing, as it were, before them in rapid succession; new objects constantly appearing in the distance; almost in an instant they are beneath their gaze, and as rapidly disappear behind them.

We must now endeavour to explain how this wonderful velocity is obtained, the railroad itself only forming a smooth and nearly level surface for the wheels of the carriages to roll upon. The motive power is steam, that wonderful power, which, in the hands of James Watt, and his successors in mechanical engineering, has given such power to an engine, which, in its present improved state, "appears," says an elegant writer, "a thing almost endowed with intelligence; it regulates with perfect accuracy and uniformity the number of its strokes in a given time, counting or recording them moreover, to tell how much work it has done, as a clock records the beats of its pendulum; it regulates the quantity of steam admitted to work; the briskness of the fire; the supply of water to the boiler; the supply of coals to the fire; it opens and shuts its valves with absolute precision as to time and manner; it oils its joints; it takes out any air which may accidentally enter into parts which should be vacuous; and when any thing goes wrong which it cannot of itself rectify, it warns its attendants by ringing a bell: yet, with all these talents and qualities, and even when exerting the force of hundreds of horses, it is obedient to the hand of a child. Its aliment is coal, wood, charcoal, or other combustible; it consumes none while idle; it never tires, and wants no sleep; it is not subject to malady when originally well made; and only refuses to work when worn out with age; it is equally active in all climates, and will do work of any kind; it is a water-pumper, a miner, a sailor, a cotton-spinner, a weaver, a blacksmith, a miller, etc., and a small engine in the character of a steam pony, may be seen dragging after it, on a railroad, a hundred tons of merchandize, or a regiment

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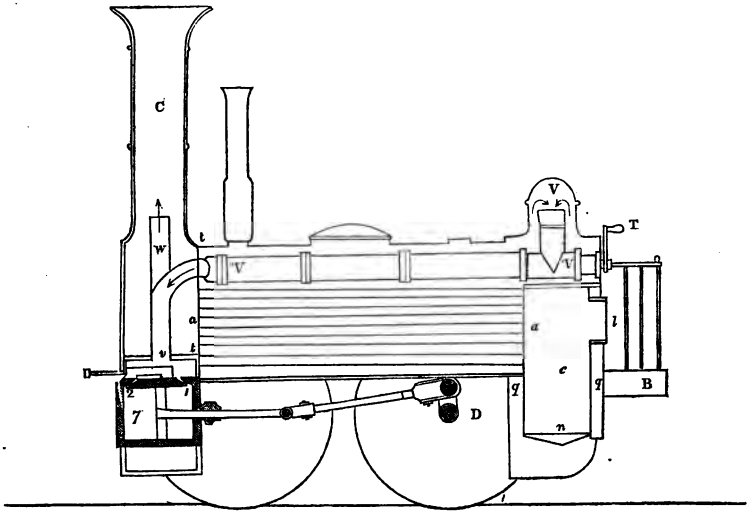
of soldiers, with thrice the speed of our fleetest horse coaches. It is, in fact, the king of machines."

The engraving at the head of this article represents a locomotive engine, constructed on the most approved principle. Its mechanism is so simple, that a short description will be sufficient to explain its mode of acting. The principal parts of the engine are, the fire-place and boiler, which constitutes the means of raising the steam; the slides and cylinders which are the means of bringing into action the elastic force residing in that steam; and the cranks and wheels, by means of which the motion is transferred from the piston to the engine itself.

The following engraving represents the internal structure of this important machine, by the help of which, and our first engraving, we hope to make its principle of action clearly intelligible; the same letters of reference being applied to both engravings.



The above engraving shows the body of the machine, as composed of three distinct compartments. The one on the left, or fronting the machine, and which is surmounted by the chimney C, is separated from the two others by the partition *t t*. The two others form the boiler; both are filled with water to near the level of the tube marked 'v and "v, but part of their internal space is occupied by the fire, as will be next explained.

In the hindmost compartment is placed a square box *e*, which contains the fuel, or forms the fire-place of the machine. Between the sides of that box, and those of the compartment in which it is contained, a space *q q* is left, which communicates freely with the remainder of the boiler, and which is consequently filled with water.

The fire-box *e*, being thus placed in the middle of one of the compartments of the boiler, would be surrounded on all sides with water, were it not for the aperture *l*, which forms the door of the fire-place, and of the bottom *n*, which forms the grate, the ashes falling through into the space beneath.

Near the door *l*, and in the machine, is placed a strong platform, represented by B, for the engine-man to stand upon. Directly behind the engine is attached the tender-carriage, with coke and water, so that it is easy for the fireman to throw coke into the fire by the door *l*, and to let water pass into the boiler whenever it may be necessary. This supply of water takes place by means of a forcing pump, put in motion by the engine itself.

The lower part *n* of the fire-place is occupied, as we have said, by a grate, and remains constantly open, ad-

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mitting the external air required for the combustion of the fuel. The coke thrown into the fire-box, falls on the grate, and is supported by it. When the fire is lit, and the door of the fire-box shut, the flame of the combustible remains confined in the fire-box. It would have no egress, if a number of small tubes, or flues, *a a*, were not to lead to the chimney, after passing through the whole length of the second compartment, or principal body of the boiler.

From the construction it will easily be understood, that the fire being shut up in the fire-box, and completely surrounded with water, none of its heated parts are lost. Afterwards the flame, in its way to the chimney, divides itself among all the small flues we have mentioned. It thus passes through the water of the boiler, having a considerable surface in contact with it; and only escapes after having communicated to the water as much as possible of the heat it contained. Once arrived at the right hand extremity of the tubes, the flame is in the compartment of the chimney, and escapes freely through the chimney C.

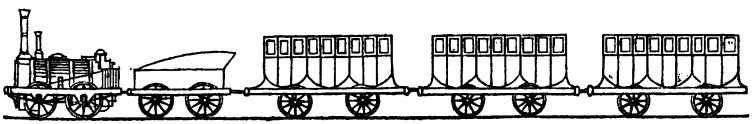
In the upper part of the boiler, that is to say, in the part occupied by the steam, there is a large bent tube, V, V', V'', which is open at the end V, and leads out of the boiler; it is by this tube that the steam is conducted into the cylinders. At V', in the interior of the tube, is a cock, or regulator, the handle T of which extends out of the machine; by turning that handle more or less, the passage for the steam may be opened or shut at will.

The steam being thus generated in great abundance in the boiler, and being unable to escape out of it, acquires a great degree of elastic force. If, at that moment, the cock at V is opened, by turning the handle T, the steam enters the tube at V, and passes along it to the entrance, *v*, of the valve-box. There a sliding valve, which moves at the same time with the machine, opens a communication to the steam necessarily with each end of the cylinders. These are placed horizontally at the bottom of the chimney compartment, where the passage of the flame, and the sides of that compartment, protect them against the effect of the cold air, and keep them in a proper degree of heat.

The direction of the arrows in the engraving, mark the line of circulation followed by the steam, from its entrance at the aperture V, into the slide box. In the situation in which the slide is here represented, passage 1 is open to the steam, and consequently the piston is pushed towards the left hand. At the following instant, passage 2 will be open in its turn, and the piston will be pushed in the contrary way. When the steam has produced its effect, it passes into the tube W, and is conveyed by it to the chimney, through which it escapes into the atmosphere.

The introduction of the steam takes place at V, at a point purposely elevated, that the bubbling, and the jolting of the engine, may not let the water of the boiler get in by the opening V.

The piston rods being set in motion according to the foregoing explanation, communicates a rotatory movement to the axle of the two hind wheels of the engine. This transformation of the alternate motion into a circular one, takes place after the manner of the common foot spinning wheels, by means of a crank in the axle, as represented at D. It is almost needless to add, that in proportion to the rapidity of this circular motion, so the wheels revolve, and the engine advances, dragging after it its tender of fuel and water, followed by a long train of carriages or wagons, as represented in the following cut.



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VISIT OF A FRIGATE OF THE ROYAL NAVY TO ONE OF THE SOUTH SEA ISLANDS.

The Rev. John Williams, in his Narrative of Missionary Enterprises, in the South Sea Islands, gives the following extract from the published account of a voyage of her Majesty's frigate, the Blonde:—

On the 8th of August, to our great surprise, land was descried from the mast-head, and as it was uncertain, from its position, whether it was one of the islands discovered by Captain Cook, we bore up for it. A boat was lowered, and Mr. Malden, with a reconnoitering party, proceeded towards the shore, with strict injunctions, however, to be cautious in endeavouring to ascertain the disposition of the natives, before he attempted to land among them. On our approaching the island, we attempted, by signs, to induce a man to swim off to the boat; this he naturally enough refused to do, but, from his gesticulations, we understood that there was no landing-place there, yet on the other side of the island we should find one.

Next morning we proceeded to the lee side of the island, and perceiving several canoes coming off to us, we lay to for them. The first that reached us was a single man, whose costume soon convinced us that we were not the first visitors of this solitary place. He wore a straw hat, shaped like a common English hat; and besides his *maro* or waist-cloth, he wore a cloak of *tapa*, of the same form with the South American poncho. While we were questioning our visitor, another canoe of very singular construction came alongside of us. Two persons, who, by their dress and appearance, seemed to be of some importance, now stepped on board, and, to our great surprise, produced a written document from that branch of the London Missionary Society settled at Otaheite, qualifying them to act as teachers in the island of Mauke. They were very fine looking men, dressed in cotton shirts, cloth jackets, and a sort of petticoat of very fine mat, instead of trowsers.

They were much astonished at every thing they saw on board the frigate, though it appeared they were not ignorant of the use of guns and other things, but they evidently had never seen so large a vessel. The galley fire and the players on wind instruments in the band seemed to surprise and delight them more than any thing. Our bread they ate after smelling it, but it is impossible to describe their faces of disgust on tasting the wine.

As soon as their curiosity was satisfied, we determined to avail ourselves of their local knowledge as guides, and to go on shore. We embarked in two boats, taking one of the missionaries in each; but we found the surf on the beach so violent that we got into the natives' canoes, trusting to their experience for taking us safely through; this they did with admirable dexterity, and our passage in the canoes convinced us that no boat of ours could have effected a landing. When we arrived, it appeared as if the whole male population had assembled to greet us; the only two women, however, were the wives of the missionaries, decently clothed from head to foot. Each individual of this numerous assembly pressed forward to shake hands, and seemed unhappy till this sign of friendship had passed; this ceremony being over, they conducted us towards their habitations, which were about two miles inland. Our path lay through a thick shady wood, on the skirts of which, in a small open space, two handsome canoes were building. They were each eighty feet long; the lower part, as usual, of a single tree, hollowed out with great skill. The road was rough over the fragments of coral, but it wound agreeably through the grove, which improved in beauty as we advanced; and at length, to our surprise and pleasure, terminated in a beautiful green lawn, where were two of the prettiest white-washed cottages imaginable, the dwellings of the missionaries.

The inside of their dwellings corresponded with their exterior neatness. The floors were boarded; there were a sofa, and some chairs, of native workmanship; windows with Venetian shutters rendered the apartments cool and agreeable. The rooms were divided from each other by screens of tapa, and the floor was covered with coloured varnished tapa, resembling oil-cloth. We were exceedingly struck with the appearance of elegance and cleanliness of all around us, as well as the modest and decorous behaviour of the people, especially the women.

After partaking of the refreshment offered us by our hostess, which consisted of a baked pig, bread-fruit, and yams, we accompanied the missionaries to their

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church. It stands on rising ground, about four hundred yards from the cottages. A fence, composed of the trunks of cocoa-nut trees, surrounds the area in which it stands; its form is oval, and the roof is supported by four pillars, which bear up the ridge. It is capable of containing two hundred persons. Two doors and twelve windows give it light and air; the pulpit and reading-desk are neatly carved and painted with a variety of pretty designs, and the benches for the people are arranged neatly round. Close to the church is the burying-place, which is a mound of earth covered with green sward; and the whole has an air of modest simplicity, which delighted no less than surprised us.

On our return to the beach, one of the missionaries accompanied us. As we retraced our steps through the wood, the warbling of the birds, whose plumage was as rich as it was new to us; the various tinted butterflies that fluttered across our path, the delicious climate, the magnificent forest trees, and, above all, the perfect union and harmony existing among the natives, presented a succession of agreeable pictures which could not fail to delight us.

OLD HUMPHREY ON THE WILD CONVOLVULUS.

It is a rare thing for Old Humphrey to find himself in a situation where he can derive no pleasure from surrounding objects. In the crowded city, and the solitary common, he is perhaps equally at home, for if there be interesting characters in the one, there are heath flowers, and blossoming furze bushes, on the other.

It did, however, happen the other day, that I found myself in a very unpromising place. I looked about me, but the road was even and straight. There were no green trees towering in the air; no neat looking cottages by the way-side; and not even a shaggy donkey browzing on a thistle, or whisking away the flies with his tail.

By the side of my path lay a muddy, slimy ditch; one of those disagreeable ditches which are always to be seen in the neighbourhood of a town, where you are sure to be annoyed with an unpleasant smell, and equally sure to see, at full length, a dead cat, and an old tin kettle.

I walked along by the side of the filth-conducting canal, till it seemed to get deeper and more disagreeable. The nettles were rank, the long grass had no variety, and the unsightly assemblage of weeds, of the most uncouth kind, apparently choking up the course of the stagnant and offensive puddle, was any thing but alluring.

I was about to step from the foot-path to the broad road, to avoid so unpleasing an object, when suddenly my eyes fell on a constellation of flowers of the most exquisite beauty. A plant of the wild convolvulus had stretched itself along the bank of that offensive puddle, wreathing it with flowers of the most lovely kind.

Had the purest white wax, or snow from the very crest of Mont Blanc been formed into flowers, and been flung carelessly upon the spot, scarcely would they have exceeded in pure and snowy whiteness the fair flowerets that were lying before me.

I lifted up my hands with emotion at the wondrous beauty of the wild convolvulus, set off as it was to advantage by the forbidding black puddle over which it was bending, and I felt grateful to Him, who, sitting upon the throne of heaven, profusely adorns the earth with beauty and glory. There is no place too dark to be gilded with His beams, no spot too forbidding to be rendered attractive by his gifts. He does, indeed, make the wilderness to be glad, and the desert place to blossom as the rose.

And think not that his goodness is bounded to the works of creation. In the habitations of the poor; in the dark seasons of poverty and trial; and in the sickening humiliations of the chamber of disease, he can bestow his gifts and his graces. Oftentimes, where we least expect to find them, his merciful providences burst upon us, and call forth our wonder and our praise.

Fellow Christian, however irksome may be the pathway thou art treading, and unpromising the prospect around thee, be of good courage! He who has given his own Son for thee, will not forsake thee. Blind though thou art to many of his gifts, he will open thine eyes to behold his goodness; dumb though thou mayest be in acknowledging his mercy, he will put a new song in thy mouth, and compel thee to praise him.

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I feel the poverty of my poor words to set forth my thoughts, but, my reader, if thou wilt ponder them in a friendly spirit, the wild convolvulus that gladdened the spirit of Old Humphrey, may haply lighten thine.

WIND-STORM IN AMERICA.

While at Washington, I first witnessed the wind-storm, which is common in this country. It is peculiar, sometimes awful. The morning had been hot, and the sky fair; I had been to the Senate, and was now resting and writing in my chamber. Quietly the soft and refreshing breezes went down; a haze came over the sun, so that it shone as behind a gauze curtain. Every noise was stilled, except that of the frog, which was unpleasantly audible. The sky got silently darker and darker; the atmosphere became oppressive; and not a breath of air was felt. Suddenly, in the distance, you would see things in commotion; and, while every thing was yet quiet about you, you might hear the distant roaring of the wind. Then the cattle run away to their best shelter; then the mother calls on her heedless children; and the housewife flies from story to story, to close her windows and shutters against the entrance of the coming foe. Now the dust, taken up in whirlwinds, would come flying along the roads; and then would come the gust of wind, which would make every thing tremble, and set the doors, windows, and trees flying, creeking, and crashing around you. You would expect the torrent to fall and to roll; but no, there was neither rain nor thunder. It was wind, and wind alone; and it wanted nothing to increase its power on the imagination. It raged for a few minutes, and then passed as suddenly away, leaving earth and sky as tranquil and as fair as it found them. It is not easy to account for this very sudden destruction and restoration of an equilibrium in nature. The phenomenon, however, supplies a fine illustration of some striking passages in holy Scripture.—*Dr. Read.*

INSUFFICIENCY OF WORLDLY OBJECTS TO GIVE HAPPINESS.

All beauty, both natural and artificial, begins to fade and languish after a short acquaintance with it; novelty is a never-failing requisite: we look down with indifference and contempt upon what we comprehend easily; and are ever aiming at, and pursuing such objects as are but just within the compass of our present faculties. What is it now that we ought to learn from this dissatisfaction to look behind us, and tendency to press forward? from this endless grasping after infinity? Is it not that the infinite Author of all things has so framed our faculties, that nothing less than himself can be an adequate object for them? That it is in vain to hope for full and lasting satisfaction from any thing finite, however great and glorious, since it will itself teach us to conceive and desire something still more so? That, as nothing can give us more than a transitory delight, if its relation to God be excluded; so every thing, when considered as the production of his infinite wisdom and goodness, will gratify our utmost expectations, since we may, in this view, see that every thing has infinite uses and excellences? There is not an atom, perhaps, in the whole universe, which does not abound with millions of molecules; and conversely, this great system of the sun, planets, and fixed stars, may be no more than a single constituent particle of some body of an immense relative magnitude, etc. We may also say, there is not a moment of time so short, but it may include millions of ages in the estimation of some beings; and, conversely, the largest cycle which human art is able to invent may be no more than the twinkling of an eye in that of others, etc. The infinite divisibility and extent of space and time, admit of such infinities upon infinities, ascending and descending, as make the imagination giddy when it attempts to survey them. But however this be, we may be sure, that the true system of things is infinitely more transcendent in greatness and goodness, than any description or condition of ours can make it; and that the voice of nature is an universal chorus of joy and transport, in which the least and vilest, according to common estimation, bear a proper part, as well as those whose present superiority over them appears indefinitely great, and may bear an equal one in the true and ultimate ratio of things. And thus the consideration of God gives a relish and lustre to speculations, which are otherwise dry and unsatisfactory, or which perhaps would confound and terrify. Thus we may learn to rejoice in every thing we see, in the blessings past, present, and future; which we receive either in our own persons, or in those of others. *Hartley.*

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ROSE AND CROWN LANE:

OR,

A SKETCH OF MY NEIGHBOURHOOD.—No. V.

The projecting pole at No. 5, announces the residence of Mr. Thompson, the barber; and a board in the window contains the farther intimation, that Mrs. Thompson and Miss Harris, dress-makers and milliners, carry on their operations under the same roof. The females are sisters, and have resided together several years. It is only within the last two or three years that Mr. Thompson has become the master of the dwelling. A scren or settle in the lower room, divides the back half (in which the fire-place is fixed) for domestic purposes; while the front is appropriated to Mr. Thompson's business. The one-pair-of-stairs apartment is occupied as a work-room; it has also a press bedstead, like that described by Goldsmith,

——— "Contriv'd a double debt to pay,
A bed by night, a chest of drawers by day."

This is occupied by Miss Harris, and a little servant girl, who is kept to carry the child about, and attend to other little matters below stairs, her mistresses being fully occupied with the needle. The attic is the dormitory of Mr. and Mrs. Thompson and child.

At twenty minutes before eight, Mr. Thompson regularly issues forth with the wig of his best customer, old Dr. Glanville, who seats himself to be shaved precisely at a quarter before eight, and if Thompson should fail, at that moment, to tap at his dressing-room door, he would stand a chance of being immediately dismissed. It is a good thing to be obliged to be regular; the habit is grafted on the occasion, and sometimes, but not always, the principle springs from the habit. Punctuality and a clean apron are essential to the favour of Dr. Glanville; and I would fain hope that neighbour Thompson finds them as essential to his own comfort as to his interest. To insure his due attendance on the doctor, Thompson is obliged to quit his bed-room by seven o'clock at latest. As he goes by the one-pair-of-stairs door, he often has occasion to arouse the slumbering tenants; unless, as it sometimes happens, the child has been restless, and the little maid called up early to take it: in either case, the fire is not lighted, nor the shutters opened, nor any thing done towards arranging the house. This is not good management: it is not for me to say how it might be ordered otherwise; everybody knows his own business best, or ought to know it; and as Mrs. Thompson and Miss Harris often say, "obliged as they are to work till eleven or twelve o'clock at night, how can it be expected they should rise very early in the morning?" There is a saying, that one hour's sleep before midnight is worth two afterwards, and that one hour's work in the freshness of the morning is worth two when wearied out at candle-light. These females might find it worth their while to try the experiment.

During the master's absence, all is hurry and bustle; all hands are wanted above and below. There is the breakfast to prepare, and the child to dress, and the bed to turn up, and the work-room to dust, before the apprentices make their appearance at eight o'clock. A quarter of an hour of their time is often lost in waiting for the completion of these operations; and, not unfrequently, in the hurry it is forgotten even to open the window, and let in a breath of fresh air, which must be peculiarly needful to purify the room, after its having been occupied through the night. Sweeping the room is entirely omitted, except once a week; as it is considered a saving of time to find the work on the table just as it was left the preceding night. Here, again, I wish my neighbours could be induced to try an experiment, which others have found successful. The other day I related to them an anecdote, which appeared to me well worthy of their notice and imitation; as both they and their young women are far from being healthy.

"A young woman who had been five years apprenticed to a dress-maker in London, and had retained her health the whole time, afterwards became an assistant in a country establishment. The situation was much more airy, and the confinement to work not so close as that to which she had been accustomed; yet, soon after entering on the situation, the health of the young woman began to decline: she suffered from huskiness of throat, cough, pain in the side, and difficulty of breathing. Similar indisposition, in a greater or less degree, was suffered by most of her companions. At length it occurred to her, that one practice of her former employer, which was omitted in her present situation, was

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conducive to the health of the inmates. Every night the work-room was entirely cleared, and all the work in hand deposited in a large recess, and shut in. At a very early hour in the morning, the windows of the work-room were thrown open, the room thoroughly swept, and the floor sprinkled; by which means it was perfectly fresh when the workwomen assembled. It was also kept aired during their absence at meal-times. In the country establishment, the work-room was only dusted daily, and swept and scoured once a week. This was done with a view to saving time, and avoiding inconvenience by the removal of the work. But thus there was constantly an unwholesome closeness in the room; and the dust and flue, being trodden and set in motion, were inhaled into the lungs. Such, at least, was the impression of the young woman referred to; and, determined to make an effort to remain in a situation which, on the whole she found agreeable, she proposed to the head of the establishment the adoption of the plan to which she had formerly been accustomed; and offered, by way of trial, to take upon herself all the additional trouble of clearing away the work, until her companions were so fully convinced of the advantage of the plan, as to be willing to share it with her. Accordingly, a large closet, in an adjoining room, was assigned her, in which she, each night, carefully placed the work and working implements. This occupied her a quarter of an hour, and a quarter of an hour in the morning to replace all in readiness for the workwomen. But in less than a month, the whole establishment had assumed an unwonted hue of health. Each found herself able to pursue her work with greater freshness and perseverance; all were thankful for the suggestion, and each was willing to take her share in the nightly clearing."

Whatever is done in a hurry, is almost sure to be done negligently; hence, Mrs. Thompson's downstairs-room, instead of being thoroughly cleaned out, which in so confined an apartment is especially needful, is generally neglected. Hence, what is of still more consequence, the poor little baby is but half-washed, or, perhaps, his washing and dressing are deferred till after breakfast, and he remains an hour or two in his night-clothes, exposed to cold, and absorbing the effluvia of night perspiration. Over this mismanagement of my neighbours, I especially grieve, as they are really fond of their child, and have already lost one by croup and teething; and I much fear that this child also will be endangered, from being so much trusted to the care of a thoughtless girl, and its comforts made to give place to the arrangements of business. I know that people in business must attend to it, if they would live by it; but then business should be regarded only as a means of living, not as the end of life. A mother's first care consists in personal attention to her offspring. No one can be an adequate substitute, nor can any gain be an equivalent. I do not mean to say that a mother ought not to work for the support of her family; I know that it is often necessary that she should do so, and that her aid is very efficient and important; but I know, too, that there are mothers who, by good management, contrive to attend well to their children, and yet be engaged in some profitable work. Mrs. Brown is an example in this particular. It strikes me that the matter hinges upon this—which shall stand in the *first* place, and which in the *second?* If the children are the first concern with regard to their health, cleanliness, exercise, and comfort, and the mother's exertions towards their maintenance the second, both may be safely, and perhaps successfully pursued; but if her work is made the first consideration, and her care of the children only the second, that will infallibly be driven into odd corners, and, in all probability, both concerns will be neglected.

It is commonly the case with females who sit closely to needlework, and keep late hours, to sit down to the breakfast table with a poor appetite; and I have reason to think my neighbours are no exception to the general rule. A large quantity of warm liquid is required to wash down a small quantity of solid food, and that generally of an indigestible kind, such as hot rolls, hot buttered toast, or muffins. While sipping their coffee or tea, the ladies are entertained with the morning's importation of the news of the town, as brought in by Mr. Thompson from the servants of Dr. Glanville, or some other houses where he has dropped in on his way home; or by the young women who have just come to work. The contents of these various budgets form the day's topic of conversation in the work-rooms;

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a portion being duly imparted to every lady who has her dress fitted on, and to every gentleman who calls to have his beard shaved or hair cut. Mr. Thompson's shop is indeed the grand emporium of news to our part of the town; but as a great part of the reports are built on very slender foundation, surmises, rumours, inferences, over-heard whispers, etc., they have more than once occasioned very unpleasant feelings in the parties whose actions, intentions, connexions, or prospects, have been the subject of the report; and have involved in unpleasant consequences those who have circulated them. I wish some more profitable topic could be found to enliven the work-room, that would not require interference with affairs in which the parties are by no means interested, but in which they may, however unintentionally, be exceedingly mischievous. It has sometimes struck me, that as young women brought up to sedentary employments, such as dress-making, straw-working, etc., are too often found deficient in general knowledge, and especially in domestic management, it might form an agreeable and profitable subject of conversation, if each in turn were required to communicate some interesting fact in natural history, or the history of our own country, or that of the Bible, or some judicious remark or economical practice which she had heard or observed from her mother, or some other female friend more conversant than herself with the management of the kitchen, the store-room, or the nursery. Now and then, also, one might read an instructive book to the others. Some good common-sense ideas might thus be lodged in the minds of the hearers, which, at a future day, might prove of practical utility, and meanwhile leave less room for the materials of scandal, mischief-making, and for being busy-bodies in the affairs of others.

While the females are at their morning's work, the master of the house stands at his door, waiting for any chance customer, running over, between-whiles, to the public-house to catch a glimpse of the newspaper, and hastening back at the tinkling of his little bell, to display to his customer a little of his political knowledge. The news of the day is generally the most wonderful he ever heard in his life. He usually pronounces the country to be on the very verge of ruin, and that nothing will rescue it except the adoption of such measures as he and a few other political wiseacres would suggest!

Meanwhile, the maid is sent out walking with the child. It often grieves me to see how awkwardly she carries it, squatting over her arm, which tightly grasps its legs; and pressing her other hand against its chest, while its head nods forward, and its back is curved like a bow. I have more than once tried to show her a better way of holding it. It is really a fine, lively child, and if well managed, bids fair to be strong, healthy, and well-formed; but if this mode of nursing is pursued, I fear it will become lumpy, misshapen, and rickety. This girl is too indolent and self-willed to improve by the experience of others; I fear she has not the real good of the child at heart; her object is to keep it quiet with as little trouble to herself as possible; and I suppose she thinks it less trouble to lug it about in this awkward, indolent manner, than to carry it upright on the palm of her hand, and keep it lively by dancing it about, occasionally changing its position, and resting both herself and it, by letting it lie on her arm. This is the way in which good nurses carry about children; but Maria is too indolent, too self-indulgent, and too eager for gossipping, to pay that attention to the child which would entitle her to the character of a good nurse. She strolls about for an hour or two in company with other nurse-girls, and then brings in her nursling, but little benefited by his exercise. It has already had a severe inflammatory attack, occasioned, there is every reason to think, by her standing about with him in a keen easterly wind. During his morning's sleep, she does what little is done in cleaning the house and getting dinner; from her total ignorance, and the absence of an efficient mistress's superintendence and directions, in all cases exceedingly desirable, but indispensable in that of a young servant, much waste and discomfort are occasioned, good provisions are spoiled in preparing; perhaps the meat is ready, and the vegetables not half boiled; or the vegetables are half cold before the meat is taken up. To avoid these inconveniences, the plan is sometimes adopted of procuring a ready-dressed dinner from a cook's-shop, a resource which may be a great accommodation in an unexpected emergency, but to which none but the extravagant and ill-managing will

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frequently have recourse. A meal of animal food ill-prepared, and a beverage of public-house beer, with all its pernicious ingredients, together with the want of air and exercise, will sufficiently account for the violent headaches, palpitation, sickness, fainting, and other symptoms of indigestion, with which one or other of the females is almost daily troubled, and which lead them to resort to the frequent use of spirits of lavender, ether, and other cordials, for immediate relief; and to antibilious pills, of one kind or other, for a permanent cure, which is always being effected, but never complete. Both these classes of remedies are delusive and injurious. While due attention to air, exercise, and diet is neglected, the use of medicines only resembles the fabled labour of one who was condemned to be continually employed in rolling a stone up hill, which naturally rolled back again. Tea is the grand panacea for nervous and sedentary people; taken in moderate quantities, and not too hot, and with a little bread, it would probably be as harmless as it is refreshing; but almost all nervous people err in taking too much warm liquid, and either without any dry food, or with such as is rich, sweet, and indigestible. Tea, however, at least affords a temporary refreshment, and the dress-makers look to a long evening as the best part of their working day.

The afternoon and evening are, to Mr. Thompson, rather a lounging part of the day. Except on Saturdays and market days, few of his customers call upon him, and he generally feels himself at liberty to spend his time over the newspaper, or perhaps to go out fishing. Of this recreation he is very fond: and often pursues it with the kind intention of getting a nice dish for his wife's supper, who, as he often observes, has a poor appetite, and supper is her best meal. He prides himself not a little on his skill in cleaning and frying fish, to which he has been accustomed in his attendance on fishing parties, and, with the greatest good humour and glee, he prepares the meal, and endeavours to hurry on the eager workers, who are sitting and working very closely to accomplish some promised article, which, perhaps, the indisposition of the afternoon has retarded. At this late hour of the evening, the beds have to be made, and the child, who ought to have been asleep hours ago, has to be undressed and fed. During his mother's close application to work, he has been many hours kept from the breast, and kept quiet by supplies of incongruous food; sweet cakes, sopped bread and butter, or something equally unwholesome; and now the milk being heated with long confinement, altogether it is ten to one but the child becomes disordered, and recourse is had to Godfrey's cordial, or some other pernicious quackery. The mother, too, with fatigue, confinement, and irregularity of appetite, first long fasting, and then eating heartily of fish and melted butter, or some other indigestible delicacy, seldom retires to bed without some degree of indisposition, and finds, or fancies, it necessary to take a glass of spirits and water for the cure of indigestion, wind, or pain in the stomach. Let me not be mistaken: I am far from insinuating that my neighbours are at all addicted to habits of intemperance; far from it: yet I regret to see them frequently adopting a seductive practice, the imaginary necessity for which arises only from inattention to the dictates of prudence, and which is never attended with permanent advantage, nor unattended with real danger. The feverishness and restlessness of the child, occasioned by such a course of proceeding, make way for a renewal of morning languor and listlessness; and thus one day succeeds another in which the subjects of this irrational course are increasingly estranged from cheerful health and vigour.

I have spoken of late rising. Saturday, however, is generally an exception.

Too large a quantity of work having been undertaken and promised, and no allowance made for the interruptions which even good management cannot altogether avoid, and which by want of management are greatly accumulated, the last day of the week is invariably overburdened; and on a Saturday the females are often at work by four o'clock in the morning, and persevere almost incessantly till twelve o'clock at night, or even later, even then perhaps leaving some promised article unaccomplished, and many to be sent home on a Sunday morning. The whole portion of air and exercise enjoyed through the week, by either Mrs. Thompson or her sister, has been that of calling on a few ladies to try on dresses, and sometimes running out for a quarter of an hour in the dusk

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of the evening. By this application their health is undermined, their spirits are harassed, many duties are neglected, and, after all, it does not appear that they are getting forward in the world. The husband is neither indolent nor vicious, yet his habits are such as tend to idleness and dissipation. Too much leisure is always a snare, and it would be the part of wisdom in one who frequently has hours, or even minutes, unemployed, to devise some plan for their useful occupation. The morning lounge over the newspaper too often leads to an eager interest in politics, and to evening spouting at club-rooms. Even the frequent recurrence of an afternoon's fishing is not advantageous to a young tradesman; it alienates from the love of steady application, and often leads to the public-house for refreshment, which is an unprofitable and dangerous expense, both of money and of time.

The Sunday morning is usually a busy time with persons of Mr. Thompson's occupation; it is much to be lamented that they and their customers do not contrive better. Much might be done on Saturday night, if persons were thoroughly impressed with the important duty and privilege of preserving the whole Sabbath as a day of sacred rest. There are persons in the trade who are never absent from public worship on the Sunday morning, nor indeed suffer any intrusion of business on the sacred day, and they have found that their customers are quite as well pleased, and their business is quite as prosperous by their obeying the laws of God and their country as by violating them; as well as that their health and domestic comfort and improvement have been greatly promoted thereby; but then such a course requires forecast and good management through the week. Those who would remember the Sabbath-day to keep it holy, must remember it before-hand. It was the day before the Sabbath that Moses reminded the Israelites, "to-morrow is the rest of the holy Sabbath unto the Lord; bake that which ye will bake to-day, and seethe that ye will seethe," Exod. xvi. 23; and those who would secure time on the Saturday to prepare for the Sunday, must begin economizing on the Monday morning, otherwise Saturday will be burdened with the neglects and postponements of the preceding days, instead of being able to anticipate the charge of that which follows. These remarks apply to my neighbour Thompson, and yet more particularly to the female part of the family, who, as I have already observed, are so pressed with work at the close of the week as to deprive themselves of needful rest, and even to thrust a portion of the cares of the world into the morning of the Sabbath.

Perhaps a few hints on this subject might not be improperly applied to those ladies who sometimes inconsiderately send in orders late in the week, with an injunction for their being immediately executed. At this time it may be supposed that the dress-maker has made her arrangements for the work of the week; and if she undertakes additional orders, either her first customers must be disappointed, or she and her young women must be overworked, or the repose of the Sabbath infringed upon. No considerate lady would like to occasion either of these contingencies. As a general rule, nothing but the preparation of mourning can justify the issuing of orders for immediate execution, later than the middle of the week.

However, I do not mean to say that my neighbours are altogether regardless of the claims of the Sabbath. I believe they all make a point of attending church once, and some of them twice in the day; but then it is not done with as much quietness and edification as might be secured by better management. On Sunday the ladies are elegantly dressed. The quality and mode of their apparel vie in fashionable appearance, if not in costliness, with those of the first ladies in the town. I hope they do not run the hazard to which poor Richard alludes, when he says that silks and satins put out the kitchen fire; and that those who indulge in superfluities are likely to want necessaries. The little boy, too, is a partaker of the finery; and though I think he would be quite as comfortable without that massy hat and feathers, which seems to weigh down his little head, and that fine velvet cuff, which he is so apt to put in his mouth, yet it is really a pleasure to see the child nice and clean, and to witness the fondness of his parents and aunt, who seem delighted with the opportunity of enjoying his infant society, of which they consider themselves necessarily deprived through the labours of the week. I wish my neighbours could be induced to make a serious calculation, and to try a fair experiment, whether health, economy, and

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domestic comfort, and especially the welfare of their child, might not be successfully promoted by their pursuing a different course, which, at the same time, need not diminish the extent and success of their business. I would suggest habitual early rising, the free admission of air to every apartment, the mother's early attention to her babe, the daily superintendence of one of the superiors in the arrangements of the kitchen; a few minutes would serve if regularly devoted to that object. The little servant to be initiated in habits of cleanliness and regularity; the child to be nursed under the superintendence of its natural guardians, not altogether banished from their sight; the mother and aunt daily devoting, or at least on alternate days, an hour or more to exercise in the open air, accompanied by the child. The father also might be better employed, in taking his child out for air, than in reading the newspaper. If regularity, and a plan pervading all the movements of the family, relative to work, meals, and dress, and no more work undertaken than could be performed within the given time, were to be the plan adopted, I venture to predict that my neighbours would find themselves the richer, the healthier, and the happier for the alteration in their mode of living.

I must add, as in former instances, that the great rectifier of social evils is true religion; and that if my neighbours were brought under its prevailing influence, it would prove the best regulator of their pursuits and pleasures, their time and engagements, their earnings and expenditure. They would find that "godliness is profitable to all things, having the promise of the life that now is, and of that which is to come."

DIFFERENCE OF CLIMATE OF THE NORTHERN AND SOUTHERN HEMISPHERES.

When we compare the climate of the northern and southern hemispheres, we obtain still more instruction in regard to the influence of the distribution of land and sea upon climate. The dry land in the southern hemisphere is to that of the northern in the ratio only of one to three, excluding from our consideration that part which lies between the pole and seventy-four degrees of south latitude, which has hitherto proved inaccessible. And whereas in the northern hemisphere, between the pole and the thirtieth parallel of north latitude, the land and sea occupy nearly equal areas; the ocean in the southern hemisphere covers no less than fifteen parts in sixteen of the entire space included between the antarctic circle and the thirtieth parallel of south latitude.

This great extent of sea gives a particular character to climates south of the equator, the winters being mild, and the summers cool. Thus in Van Diemens Land, corresponding nearly in latitude to Rome, the winters are more mild than at Naples, and the summers not warmer than those at Paris, which is seven degrees farther from the equator. The effect on vegetation is very remarkable; tree ferns, for instance, which require abundance of moisture, and an equalization of the seasons, are found in Van Diemens Land, in latitude forty-two degrees south, and in New Zealand, in south latitude, forty-five degrees. The orchideous parasites also advance to the thirty-eighth degree, and forty-second degree of south latitude. Humboldt observes, that it is in the mountainous, temperate, humid, and shady parts of the equatorial regions that the family of ferns produce the greatest number of species. As we know therefore that elevation often compensates for the effect of latitude in the geographical distribution of plants, we may easily understand that a class of vegetables which grow at a certain height in the torrid zone, would flourish on the plains at greater distances from the equator, if the temperature, moisture, and other necessary conditions, were equally uniform throughout the year.

It has long been supposed that the general temperature of the southern hemisphere was considerably lower than that of the northern, and that the difference amounted to at least ten degrees, Fahr. Baron Humboldt, after collecting and comparing a great number of observations, came to the conclusion that even a much larger difference existed, but that none was to be observed within the tropics, and only a small difference as far as the thirty-fifth and fortieth parallel. Captain Cook was of opinion that the ice of the antarctic predominated greatly over that of the arctic region; that encircling the southern pole coming nearer to the equator, by ten degrees, than the ice around the north pole. But the recent voyages of Weddell and

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Biscoe have shown that on certain meridians it is possible to approach the south pole nearer by several degrees than Cook had penetrated; and even in the seventy-third and seventy-fourth degrees of south latitude, they found the sea open, and with few ice floes.

Nevertheless, the greater cold of high southern latitudes is confirmed, by the description given, both by ancient and modern navigators, of the lands in this hemisphere. In Sandwich land, according to Cook, in fifty-nine degrees of south latitude, the perpetual snow and ice reach to the sea beach; and what is still more astonishing in the island of Georgia, which is in the fifty-fourth degree south *latitude*, or the same parallel as Yorkshire, the line of perpetual snow descends to the level of the ocean. When we consider this fact, and then recollect that the summit of the highest mountains in Scotland, four degrees farther to the north, do not attain the limit of perpetual snow on our side the equator, we learn that *latitude* is one only of many powerful causes which determine the climate of particular regions of the globe. The permanence of snow, in the southern hemisphere, is, in this instance, partly due to the floating ice which chills the atmosphere, and condenses the vapour, so that in summer the sun cannot pierce through the foggy air. But besides the abundance of ice which covers the sea to the south of Georgia and Sandwich land, we may, also, as Humboldt suggests, ascribe the cold of those countries, in part, to the absence of land between the tropics.

If Africa and New Holland extended farther to the south, a diminution of ice would take place in consequence of the radiation of heat from these continents during summer, which would warm the contiguous ice, and rarify the air. The heated aerial currents would then ascend and flow more rapidly towards the south pole, and moderate the winter. In confirmation of these views, it is stated, that the ice which extends as far as the sixty-eighth and seventy-first degree of south latitude, advances more towards the equator whenever it meets an open sea; that is, where the extremities of the present continents are not opposite to it; and this circumstance seems explicable only on the principle above alluded to, of the radiation of heat from the lands so situated.

The cold of the antarctic regions was conjectured by Cook to be due to the existence of a large tract of land between the seventieth degree of south latitude and the pole; and it is worthy of observation, that even now, after the most recent voyages, the area still unexplored within the antarctic circle is much more than double the area of Europe. Some geographers think that the late discovery of Graham's and Enderby's lands, between latitude sixty-four and sixty-eight degrees south, both of which Capt. Biscoe believes to be of great extent, has strengthened the probability of Cook's conjecture. These newly observed countries, although placed in latitudes in which herds of wild herbivorous animals are met with in the northern hemisphere, nay, where man himself exists, and where there are ports and villages, are described as most wintery in their aspect, almost entirely covered, even in summer, with ice and snow, and nearly destitute of animal life.

The distance to which icebergs float from the polar regions, on the opposite sides of the line, is, as might have been anticipated, very different. Their extreme limit, in the northern hemisphere, is latitude forty degrees, as before mentioned, and they are occasionally seen in latitude forty-two degrees north, near the termination of the great bank of Newfoundland, and at the Azores, latitude forty-two degrees north, to which they are sometimes drifted from Baffin's Bay. But in the other hemisphere, they have been seen, within the last few years, at different points off the Cape of Good Hope, between latitude thirty-six and thirty-nine degrees. One of these was two miles in circumference, and 150 feet high, appearing like chalk when the sun was obscured, and having the lustre of refined sugar when the sun was shining upon it. Others rose from 250 to 300 feet above the level of the sea, and were therefore of great volume below; since it is ascertained, by experiments on the buoyancy of ice floating in sea water, that for every solid foot seen above, there must at least be eight cubic feet below water. If ice islands, from the north polar regions, floated as far, they might reach Cape St. Vincent, and there, being drawn by the current that always sets in from the Atlantic through the straits of Gibraltar, be drifted into the Mediterranean, so that

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the serene sky of that delightful region might soon be deformed by clouds and mists.—*Lyell.*

IMMENSITY OF THE UNIVERSE.

If we are permitted, on such a subject, to argue from analogy, we may fancy to ourselves some such idea as this,—that each nebula or group of stars, bears the same reference to other groups which our planetary system does to the globes of which it is composed; and that, while they may be impressed with a rotatory motion round each other, like our satellites round their primaries, there is some central point of unknown position, and immeasurable dimensions, round which the whole groups of the universe revolve, like our little worlds round their sun. There are not wanting reasons for such a supposition. The two great laws of gravitation and inertia, by which our own system is regulated and maintained, have been proved to exist with precisely the same powers, at least in some of the fixed stars. The probability, therefore, is, that these are universal qualities inherent in all material objects. This being granted, seems to imply the necessity of a balanced rotatory motion in every system of worlds, for preserving the general equilibrium of the whole; because universal attraction must prevent any body from remaining absolutely stationary. Now, the same principle appears to apply to groups of systems which applies to systems themselves. Hence we may infer a complication of movements of the most wonderful and extensive kind, combining not merely worlds with worlds, and systems with systems, but nebulæ with nebulæ, embracing the whole material creation, and extending to infinity. What a magnificent view does this afford of the works of the Eternal; and what a beautiful unity does it appear to give to his operations! —*Duncan.*

THE INFIDEL RECLAIMED.

The following reasons were assigned by a reclaimed infidel for renouncing Deism and embracing Christianity:—

1. That I never saw, heard, or read of any man, woman, or child, that was reformed, either in whole or in part, by embracing the principles of Deism.

2. That I have known hundreds, and heard of thousands of persons, who have been reformed by embracing Christianity.

3. That I have known industrious and sober men, who by imbibing the principles of Deism almost instantly became desperately wicked, and in many instances, dangerous members of civil society.

4. That I have known some Deists, and many scoffers at religion, speedily and effectually turned from the most abandoned practices, by the preaching of the gospel, to a life of righteousness, which showed itself by sobriety, industry, charity, brotherly kindness, and universal philanthropy.

5. That I do not recollect ever hearing but one Deist profess really to believe in a future state of rewards and punishments.

6. That I never met with a man who professed to be a real Christian, but who built his principal hopes upon the reality of a future state.

7. That I cannot, in all the Deistical writings, find any law to prevent wickedness, and encourage virtue, with rewards and punishments annexed thereto.

8. That in Scripture all the crimes that man can possibly commit are, under the severest penalties, forbidden; and every possible virtue inculcated and encouraged, by promises of eternal and exceeding great rewards.

9. I have known some Deists, and read of many, who, apparently at the point of death, were seized with the most horrible despair, uttering the most bitter reflections against themselves, for their total neglect of those duties commanded in the gospel. But who ever heard or read of a Christian, at the hour of death, despairing of the mercy of God, because he had all his life-time rejected Deism, and shunned the company of its professors? Or, even when long, fierce diseases had shaken the nervous system, and raging fevers inflamed the blood, have Christians ever been so far deranged as to wish they never had been born, for not rejecting the Bible as a wicked and mischievous imposition on the human race?—*Youth's Instructor.*

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Henry VI. and Margaret.

ENGLISH HISTORY.

HENRY VI.

(Concluded from page 206.)

It has been stated, that from the time of the death of Henry V., there were disputes arose between the Bishop of Winchester and the Duke of Gloucester, in which the craft and adroitness of the ecclesiastic prevailed over the hasty temper and violent passions of the prince. Gloucester sought to be the governor of England during the infancy of his nephew, and the absence of his elder brother in France; but Beaufort contrived that he should have only the name of Protector, while the power was really lodged in a council of regency, in which he himself bore the rule. Even this limited influence of Gloucester was gradually diminished; his salary as protector was lessened from 8000 marks to 4000; and in 1429, when the king was only eight years old, the title of Protector was abolished, and the king was crowned. Gloucester then acted merely as one of the council.

The reverses in France induced the English leaders there to desire that Henry should be crowned at Paris, and early in 1430 he set forth with a numerous retinue; but the alarm excited by the reports of the successes of Joan of Arc, rendered it necessary to enforce the attendance of the military, by a proclamation against those who deserted "for feare of the mayde." Henry did not advance from Calais till the news of her being taken prisoner was received. He was conducted to Paris in the following November, and in December he was crowned in the Church of Notre Dame, and returned to London in February, 1431. A minute account is preserved of the pageants displayed, and the amusements on this occasion both in Paris and London.

Turner remarks:—"The absurdities

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of human pomp, flattery, and irreverent fancy, to a boy of ten years old, could go no higher. There is a nothingness in pomp when reason recalls it to our quiet recollection, which surprises us that we could have enjoyed it; and yet we crowd to gaze at it and to contribute to it, as if it merited our applause, and were a useful element of human felicity. It is manhood amusing itself with the drama and puppets of the child."

Assuredly, the pageants and shows on this occasion were suited to amuse the royal child; but they must have overshot the mark, and wearied him. Among the devices, several indicated that the bitter spirit of persecution had not slackened. At the coronation dinner in November, 1429, a "sotiltie" (a device with figures made in paste) was exhibited, which represented the emperor Sigismund, by whose concurrence and treachery John Huss was entrapped and put to death. He was standing with Henry v., the persecutor of the English followers of Christ, and Henry vi. kneeling before them, with "a ballad," or verses, against the Lollards, recommending the conduct of these monarchs as "giving example to kings that succeed." Nor were the persecutors idle. While the Bishop of Winchester, lately made Cardinal, influenced the government, the poor Lollards were harassed by fines, imprisonments, and scourgings, and several were burned alive; but for particulars the reader must be referred to other histories, especially to that invaluable work, "The Actes and Monumentes of John Foxe," who gives numerous extracts from the register books kept by the bishops themselves. The bitter enmity of the church of Rome to the truths of Scripture, was shown at this period by the pope causing the bones of Wickliff to be dug up and burned. This was in 1428; the ashes were thrown into a brook which ran into the Severn, and were thus conveyed to the ocean; "an emblem," says *Fuller*, "of the wide diffusion of his doctrines all the world over." Let us not forget, that the great offence of Wickliff was his causing the Scriptures to be circulated in the language of the common people.

It is important for the reader to notice how closely the English monarchy was connected with the church of Rome, and how the power of its government was directed to rule and enslave the consciences of men, and to keep their minds in popish errors, resisting the general and legitimate demand for reformation. From hence, in a great measure, proceeded that opposition, which in a few years divided the kingdom under the banners of two contending parties. The house of Lancaster, supported in its usurpations by the church of Rome, was compelled to be at enmity with all who, either from religious or political motives, sought to emancipate their country from usurped authority, both in civil and religious matters; and the cruel severities exercised upon all who differed from the Romish church, only increased the hatred and opposition which already appeared against the ruling powers. Persecution for conscience' sake always defeats itself in the end, though for a time it may seem to prevail. As the church of Rome was supported by the greater part of the nobility, so the "new opinions," as the ancient doctrines of the gospel were falsely called, interested the people at large, and thus political feeling was mixed with what should have been kept wholly distinct. But this has ever been the case, not from any error in the principles of true religion, but from the evil passions which rule the hearts of men.

In the spring of 1430, these discontents broke out into open violence. Tumultuous assemblies were held in the midland counties, where the persecutions of the bishops had been most violent, and the popular feeling was directed against monastic establishments, which have ever been the strongholds of popery and persecution. At Abingdon an attack was made on the monastery, which, like many similar establishments, had been used as a place of imprisonment for persecuted saints. The regency sent the Duke of Gloucester with an armed force, and this tumult, which does not appear to have been an organized effort, was easily suppressed, and the leader executed. This disturbance does not seem to have been connected with the Lollards, though the leaders of the tumult spoke against the priesthood.

In 1431, we find the ruling ecclesiastics loudly calling for unity, which, in their acceptation of the term, meant blind submission, in spiritual as well as temporal matters; but the measures resorted to for this purpose only caused the discontent to be more deeply felt. Glou-

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cester, with all his evil passions, had a love for literature, which expanded his mind, and animated him against the mental tyranny of the church of Rome. This gave him weight and influence with the literary characters of the day, and his personal hatred to Beaufort made him ready to promote measures in opposition to the ecclesiastics, and favourable to the popular feelings. Therefore he openly met the above-mentioned call for "unity," by urging that it would be best attained if the nobles and prelates would be more unanimous with the commons. The efforts of Gloucester succeeded so far, that, in 1433, the Duke of Bedford was requested by the parliament to stay in England, and direct the public affairs. He consented; and the advantages of the war in France formed a subject for discussion. The national pride was averse to such a peace as could then be obtained from France: but the idea of conquering that country was evidently a mere illusion. Some of the nobles and leading characters had been enriched by their plunder and their pay, but the nation at large was impoverished by having furnished the supplies necessary for carrying on the warfare. Another cause of trouble now pressed upon the government, namely, pecuniary difficulties. The crown was considerably indebted, and the deficiency increased every year, as the annual income was less than the expenditure. This has ever been productive of troubles in a country, and it was one cause of the civil dissensions which followed; though as yet it only led to the weakening of the English power in France. The indolence of the French king had deferred the expulsion of the invaders, but the occurrences of 1435 hastened that event. Negotiations for peace were then broken off; the Duke of Burgundy made peace with Charles, and joined the French; the Duke of Bedford died, worn out by fatigue and disappointment; and in the following year the French king regained Paris.

The Duke of York was appointed general in France, and with Talbot was enabled to make a more vigorous opposition to the progress of the French power. Negotiations for peace were renewed in 1439, but again failed, from the prospect which the French then had of driving the invaders from their land.

No events of interest are recorded as occurring in England during the later years of the king's minority, except the intrigues and struggles of party. It is not easy clearly to ascertain the particulars; but it is evident that Cardinal Beaufort and his partizans used their utmost endeavours to retain supreme authority. The king was not suffered to take any part in public affairs; and the severe bondage in which his mind was held by the ecclesiastics, and by his governor, the Earl of Warwick, must have increased, if it did not originate that incapacity which he afterwards displayed. The coercion exercised over him by his stern tutor enfeebled his mind, and rendered it easy for his priestly ministers to keep him in a state of ignorance and incapacity. The spirit of superstition was used to influence him to a baneful extent. Many proofs are recorded by monkish historians, of the extent to which superstitious practices were then carried. In one year, 1434, more than 3000 pilgrims went by sea to Spain, incurring the dangers of the voyage and journey, to visit a shrine dedicated to Saint James.

While the public revenue became more and more disordered, the cardinal amassed vast riches, and thus added to his influence. When attending a council at Basle, he obtained permission to carry £20,000 in money with him. Gloucester now urged that the ecclesiastical statesmen should be put from the royal councils, and again pleaded the cause of the oppressed commons; he was the most popular character of the day, and known as "the good Duke Humphrey."

The clergy had recourse to the means most within their power to lower the influence of their opponent. In 1443, charges of witchcraft and magic were brought against the Duchess of Gloucester. The superstitious ignorance of the people at that period made them credulous on these points, and the cognizance of them rested with the church. The duchess was found guilty, disgraced by a public penance which required her to walk barefooted in a white sheet, carrying a taper through the streets of London. Afterwards she was banished to the Isle of Man, while several persons charged with being her accomplices, were put to death. It is probable that she had taken a part in some ridiculous scenes of incantation, under the belief that she should thereby obtain supernatural support to the power of her husband, and she was probably the dupe of some who thought to profit by her credulity. The council gravely investigated charges which would now only be

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laughed at; but there is good reason to believe that "lollardy" was one of the matters which rendered her obnoxious to the church. Ten years before, similar charges had been made against some who were now involved with the duchess. Her chaplain, who was first included in the accusation, was the only one pardoned.

Cardinal Beaufort hesitated not to resort to the most unjustifiable measures to maintain his power. His supporters interfered with the elections of the commons, and he resolved upon two other plans, in which his factious partizans were successful; but while they digged a pit for others, they fell into it themselves. One measure was, to obtain peace with France upon any terms; and the other, to unite the king to a princess to be selected by the ruling prelate. In 1442, the daughter of the Earl of Armagnac had been thought a proper person to be the queen of England. Gloucester recommended this alliance, especially as it was one by which Gascony and Auvergne would be secured to England; but the Earl of Suffolk, one of his principal supporters, counteracted this plan, and selected Margaret of Anjou, a pleasing, high-spirited young female, whose father possessed the empty appellation of King of Naples, Sicily, and Jerusalem, but had no real power or influence in any of those states. This union could give no advantage to the English monarch; on the contrary, it was agreed that a considerable portion of his remaining territories in France should be ceded to the king of that country, who was related to the princess, before Charles would allow the marriage to be completed. Suffolk was the most active promoter of this union, and for a time the cardinal and his compeers rendered it popular in England; but thinking men already saw it was a measure hurtful to the kingdom, and likely to be ruinous to those who promoted it.

After the completion of this plan, in May, 1444, strengthened by the accession of the new queen, Suffolk, Beaufort, and their associates, resolved upon the destruction of Gloucester. Early in 1447, a parliament was summoned to meet at Bury, where the duke and his attendants were arrested and imprisoned upon a charge of high treason. On the 23rd of February, before any trial or examination had taken place, Duke Humphrey was found dead in his bed. The report was, that he had died of apoplexy; but the circumstances were such as to make it generally believed that he had been murdered, as the only means by which his political rivals could hope to maintain their ill-gotten power and influence. We have noticed his popularity; and it is evident that he strongly opposed the unscriptural usurpations of the church of Rome, but probably from political views, rather than from any thorough conviction of the soul-destroying nature of the errors of popery. It is clear, however, that he did not believe in the false miracles of his church; and his detecting an impostor who pretended to have received sight at the shrine of St. Alban, increased the enmity of the ecclesiastics. This man pretended to have been blind from his birth, yet when brought before the duke, immediately after the pretended miracle, he named, without hesitation, the various colours of the cloaks worn by the duke and his attendants, when desired to do so. Still he pretended to be lame, but when the duke sent for a scourge, he recovered his feet, and ran away!

Beaufort did not long survive the nephew whom he so bitterly opposed, and whom he probably murdered. In six weeks from that time he was laid on his death bed. Then he found all his wealth and power of no avail. Baker, his chaplain, reports him to have said, "Why should I die, having so much riches? If the whole realm would save my life, I am able, either by policy to get it, or by riches to buy it. Fie! will not death be hindered? Will money do nothing? When my nephew of Bedford died, I thought myself half up the wheel: but when I saw mine other nephew of Gloucester deceased, then I thought myself able to be equal to kings; and so thought to increase my treasure, in hope to have worn a triple crown. But I see now the world faileth me; and so I am deceived. I pray you all to pray for me." In this wretched state he sought to purchase heaven with some portion of the wealth he could no longer retain, by making considerable bequests in charity, and for ecclesiastical purposes, and to quiet his conscience, by having the offices and mass of the church of Rome chaunted over his poor dying body; but historians agree in representing that conscience would not thus be silenced. Other nobles suspected of participating in the guilt of the murder of Gloucester

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came to an untimely and violent end, while the young queen effectually lost her popularity, by the deed which her supporters thought would strengthen her power.

Suffolk found himself involved in increasing difficulties. He was impeached in parliament, in January, 1450; many charges of corruption and treason were brought against him; especially with reference to the decline of the English power in France. His unpopularity compelled him to bend to the storm, and he was ordered to leave England for five years. The populace rose to seize him, but he escaped to Suffolk, where he remained for a month, in which time he wrote a letter to his son, containing excellent advice, and showing that the writer knew what was the best course, though he chose to pursue the worst; and thus he is proved to have been inexcusable.

He found it advisable to embark at Ipswich for the Continent in May, when he was captured by a ship, which, some think, was prepared to intercept him. The sailors subjected him to a trial, he was condemned, forced into a boat and beheaded, and his body left upon the sands near Dover. The lawless manner in which he was destroyed cannot be palliated or excused; but had he died by the hand of justice, his fate would have been what he deserved.

The truce with France, agreed to at the time of the king's marriage, had been broken in 1448. The Duke of Somerset was then the English regent on the Continent. After a short struggle, the French arms rapidly prevailed. The national disgrace excited universal displeasure in England. The death of Suffolk was followed by that of other leading members of Beaufort's administration, the Bishops of Salisbury and Chichester, who were murdered by the populace. The general hatred to the queen, and the faction she supported, had now drawn attention to the Duke of York, when the superiority of his title to the throne became a general subject of discussion. He was then in Ireland, but the discontented naturally looked to him. A popular insurrection broke out in Kent, in May, 1450, headed by an Irishman, named Cade, who assumed the name of Mortimer, and pretended to be related to the Duke of York. Some of the clergy of that day themselves admit that the abuses which prevailed among their body, contributed to stir up this revolt. The people at large, though they could not understand the doctrinal errors of the church of Rome, could easily discern the ambition and luxury of its clergy, and the sufferings of those whom they persecuted for the gospel's sake.

The populace collected on Blackheath, and assumed a threatening position, under the conduct of some leaders who had served in France. It was an ebullition of popular fury, in many respects similar to that of Wat Tyler, though directed by men of more ability. By a retreat to Seven Oaks, the royal forces were drawn into an ill-timed pursuit, and were defeated with the loss of their commanders. Cade advanced towards London, making several demands which gratified the people, and he was evidently favoured by some persons above the common rank. The court fled to Kenilworth, and he was admitted to the city, where he struck the London stone in Cannon-street, with his sword, exclaiming, "Now Mortimer is lord of this city." He then caused Cromer, the sheriff of Kent, and the Lord Say, another unpopular minister, to be beheaded.

The citizens, at first, favoured the demands of the insurgents, but alarmed by some attempts to plunder, at night they attacked the main body of the rebels then stationed upon the bridge, and drove them into Southwark. On July 9, Cade and his followers had a conference with some of the king's council, and received the royal pardon, when they retired to Dartford and afterwards to Rochester. There they quarrelled about their plunder, and dispersed. Cade endeavoured to conceal himself, but was pursued and killed in an orchard.

Thus ended an insurrection, which, by destroying some of the queen's supporters, weakened her faction; by its suppression, however, the survivors were encouraged to proceed in their unpopular course. They had not the ability requisite to discern and promote the real interests of the country; while the evident incapacity of the king weakened their power, and yet it was the cause why the rule was continued in such inefficient hands. The queen used her influence so as to place the king, and the small party she favoured, in direct opposition to the rest of the nobles and the popular feeling of the land; and this state of things was increased by infractions of

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the constitution, and opposition to the national spirit of inquiry upon religious subjects. The better sort of characters, even among the Romish priests, bore open testimony against the public evils and want of justice. We are told that Lord Say would not suffer any one to preach before the monarch, unless he first saw a written copy of the sermon, or had a distinct pledge that there should be no reflection upon the king's ministers. Certainly all preaching on political subjects should be decidedly condemned; but it was equally bad to make the pulpit subservient to the views of a courtly faction. The awful lengths to which the ecclesiastics went, is shown by their procuring, in 1441, a pardon for all the clergy who were accused of robbery or other felonious acts, upon a general payment of a mark, or 13*s.* 4*d.* each, from every priest in the kingdom. They had already procured a law that they should be tried for all crimes only by their own bishops, and now they sought a general amnesty, or rather impunity for their crimes.

The French had gradually advanced in regaining possession of their kingdom. In April, 1450, Caen was besieged, and tamely surrendered by the Duke of Somerset, who commanded there in person, against the will of the governor, who held it under the Duke of York, on whom the city had been bestowed. This made a personal quarrel between Somerset and York, who were already rivals, the former being one of the Beaufort family.

Henry continuing childless, the future succession to the throne became a subject of anxiety. Somerset claimed to be the representative of the house of Lancaster. The Duke of York, undoubtedly, represented the line of Clarence; and as the priority of Lancaster was only founded on parliamentary authority, its only title, of course failed when it resisted the popular voice, and sought to rule by arbitrary power.

In September, 1450, the Duke of York landed in Wales, and advancing to London with 4000 men, complained to the king of the state of public affairs, and besought him to summon the parliament. The queen interfered, and York was obliged to retire to Fotheringay. Somerset was sent for, and assumed the sovereign rule, with all the unpopularity of having occasioned the loss of Normandy. A petition, supported by several leading nobles, was presented against this appointment, and tumults were excited in several places.

It was proposed in parliament that the Duke of York should be declared heir presumptive; but matters were not ripe for this, and he was committed to the Tower. The state of public affairs became more and more disordered. Several leading nobles raised bodies of armed followers, and came into open conflicts with others. Another circumstance, which had some effect in promoting civil dissensions, was the return of the soldiery from France, where the English had now lost all their possessions except Calais. These men, accustomed to a lawless course of rapine, eagerly espoused the cause of one or other of the contending parties, and were ready for deeds of violence and blood.

The Duke of York raised an army in Wales, and passing to the south of London, encamped near Dartford, in February, 1451. The king's friends assembled troops, and marched against him. They pretended to comply with his demand, that Somerset should be placed in restraint, to answer the charges laid against him; upon which York consented to disband his army—proof that at this time, he only desired to redress the public grievances. On repairing to the royal presence, however, he found Somerset at liberty, who accused him of treason. York was thus entrapped, and obliged to accompany the king to London as a prisoner himself. But his son raised a force to rescue him: at this juncture, ambassadors arrived from Gascony, inviting the English to re-occupy that country. Under these circumstances, it was resolved to liberate the duke, while Somerset remained in full favour and exercised his power. The veteran, Talbot, was sent to Bourdeaux, but his forces were unable to withstand the concentrated power of France; and the use of fire-arms had already changed the system of warfare. Talbot fell by a cannon-shot, Aquitaine was lost, the English were defeated, and only retained possession of Calais. This final expulsion from France increased the discontent of the nobility, who often provided for their younger sons in these continental possessions, and it also supplied a further number of discontented spirits to engage in the discord at home. The king's debts were now declared to amount to £372,000.

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In October, 1453, the king was attacked by a malady which for a time deprived him of the use of his limbs and of his reasoning faculties. A prince was born at this crisis, which deprived the Duke of York of the probability of quietly regaining his right. After some further changes, early in the following year Somerset was sent to the Tower, and the Duke of York assumed the administration. He was appointed protector, on its being ascertained and publicly declared, that though the king could eat, be moved, and breathe, yet he could not hear, understand, or speak.

At Christmas the king suddenly recovered from his state of imbecility, which had lasted twelve months. His first act showed his piety, though it was a mistaken superstition. He sent a thank-offering to the shrine of St. Edmund. The queen now resumed her sway. Somerset was released from the Tower, and again invested with the supreme authority, as minister, while York was set aside. A mortal enmity existed between these leaders, and the rest of the nobility favoured one or the other. It was evident that the life of one would be sacrificed. The short administration of York had increased his popularity; he was supported by the powerful Earls of Salisbury and Warwick, a father and son, who were Nevils, but each had married a wealthy and powerful heiress; the first, the daughter of Montacute, the Earl of Salisbury, who was slain at the siege of Orleans; the other, the daughter of Beauchamp, Earl of Warwick, who was tutor to Henry VI. Her husband, by his courage and ability, obtained such sway during the troubles which followed, that he bore the appellation of "the king-maker."

In May, 1455, York and his followers marched towards London with an armed force. Somerset and Buckingham raised troops and advanced to St. Albans, taking the king with them. The numbers on each side were comparatively small, only between two and three thousand men. The struggle had hitherto been only for political power; the nation at large was interested, but not yet engaged in the conflict. York and his supporters still confined their demands to the redress of grievances, and the delivering up of the accused ministers; but the answer sent to them threatened the extreme punishment for treason, and left them no alternative but to succeed or fall. York assaulted the town, and his enemies fled. The king was wounded by an arrow, and afterwards taken prisoner, in the house of a tanner. Somerset, Northumberland, and Clifford were slain. Their deaths made the victory complete. York treated the king with respect, and assumed the office of High Constable of England. He was contented with the authority of prime minister, which was confirmed to him by the return of the king's malady in the course of the summer. This was the first battle of St. Albans, fought on May 22, 1455; the first drops from that vial of wrath which was about to be poured forth upon the English nation, by the longest and most bloody civil war recorded in its annals. We have seen that there was a cause for these inflictions. The truth had been perverted in the land; and according to the word spoken by the prophet, "Woe unto them that call evil good, and good evil; that put darkness for light, and light for darkness; that put bitter for sweet, and sweet for bitter!" The results in England were the same as in Israel of old. "Therefore as the fire devoureth the stubble, and the flame consumeth the chaff, so their root shall be as rottenness, and their blossom shall go up as dust: because they have cast away the law of the Lord of hosts, and despised the word of the Holy One of Israel. Therefore is the anger of the Lord kindled against his people, and he hath stretched forth his hand against them, and hath smitten them: and the hills did tremble, and their carcases were torn in the midst of the streets. For all this his anger is not turned away, but his hand is stretched out still." Isa. v. 20, 24, 25.

From the proceedings in parliament, it appears that tumults had taken place in the western counties. As civil contests had begun, some of the leading nobles took the opportunity of mixing up their private quarrels with the interests of their parties. Madness possessed the rulers; the people suffered as well as their lords.

> ——When war the masters of mankind,
> Woe to the poor man! if he sow his field,
> He shall not reap the harvest; if he see
> His offspring rise around, his boding heart
> Aches at the thought that they are multiplied
> To the sword.—SOUTHEY.

The royal infant was created Prince of Wales, and the Duke of York showed no inclination to lay claim to the crown. But another change took place in February, 1456; the queen and her party so far

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regained their influence, as to displace York from the protectorate. He did not offer any opposition, but retired to Sandal castle. Matters continued in an unquiet state for about two years, when the queen carried the king to Coventry, inviting York, with his great supporters, Salisbury and Warwick, to attend the court. On their arrival, they learned, just in time to escape from the city, that Margaret had formed designs against their lives. This put an end to all future confidence between the queen and the Yorkist nobles.

The king, in the quiet, and, we may add, the pious simplicity of his heart, endeavoured to effect a reconciliation, and invited the leaders of each party to attend him in London early in 1457. The nobles came with such numerous bands of retainers, that the mayor thought it necessary to have 5000 citizens well armed, daily upon guard to keep the peace. An outward reconciliation was effected, and the contending nobles walked hand in hand to St. Paul's, followed by the king and queen; the latter led by the Duke of York. All this, however pleasing, was outward show; their hearts meant not so, neither did their spirits think so: still it was a pleasant sight, and must have excited thankfulness in many a heart, already under deep anxiety in the prospect of the horrors of civil warfare. A ballad written on the occasion begins with a serious truth:—

"When charity is chosen with states to stand,
Stedfast and still without distance,
Then wrath may be exiled out of this land,
And God, our Guide, to have the governance."

But, alas! the ground upon which this concord was founded was only sand. The same poem states,

"At Paul's in London, with great renown,
On oure Ladyday in Lent, this peace was wrought,
The king, the queen, with lords many one,
To worship the Virgin as they ought."

The Divine blessing could not be expected upon a compact founded on idolatrous worship. A quarrel between a servant of the king, and one of Warwick's retainers, led to an attack upon the earl, who escaped with difficulty. The queen ordered him to be apprehended as the aggressor; upon which he retired to Calais, of which place he was governor. The queen was perhaps deceived; but the alarm of York and his party was not unfounded; while their opponents were apprehensive the duke would usurp the crown. Margaret pursued a course which compelled him to make the attempt, unless he was willing to be destroyed by faction.

We can give only a brief statement of the rapidly changing scenes that followed. Both parties now took the field; and in September, 1459, Audley, with a superior force of Lancastrians, encountered the earl of Salisbury at Blore-heath, in Staffordshire. The latter was victorious, and the Yorkists concentrated their forces near Ludlow. The royal army soon met them; and a false report, which was spread by York concerning the death of Henry, roused the king to unwonted energy. The falsehood was detected; and in the ensuing night, Trollope, one of Warwick's principal commanders, deserted to the Lancastrians. These circumstances so dispirited his army, that York ordered a retreat, and fled to Ireland; while Edward, his eldest son, retired with Salisbury and Warwick to Devonshire, and from thence to Calais.

The Lancastrians were now unopposed; early in 1460 they attacked Calais, but without success. Lord Rivers was at Sandwich, preparing an expedition against that town, when by an ably-planned surprise he was taken in his bed, and brought before the nobles at Calais, where Rivers was bitterly reproached by Salisbury, Warwick, and Edward. The latter little thought that the father of his future queen was then before him.

The spring passed away in desultory contests. In June, Warwick landed in Kent with 1500 men, and before he reached London he had 40,000 armed followers. Now the nation was roused to take a part in the contest. They considered that the cause of York involved civil and religious liberty, and a deliverance from evil rulers. The sanction of some among the leading clergy was given to this effort, probably from the consideration that the cause of Henry must fall: the church of Rome is ever ready to forsake the declining interests of those who are misled by its own teachers. The Yorkist nobles advanced beyond London to meet the queen, who hastened to battle. The armies met at Northampton; the Lancastrians were defeated; and when Edward, with Warwick, entered the royal tent, they found Henry deserted and alone, bewailing the madness of the contending parties. They conducted him to London with respect; but it was now evident that the cause of Henry could no longer be separated from that of Mar-

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garet: he would gladly have promoted peace, and given consent to the desires of his people; but he was a mere puppet in the hands of an ambitious woman. In October, York arrived in London, and entering the parliament then assembled in the painted chamber, he stood under the royal canopy, declared his right to the throne, and delivered a statement of his claim in writing. The decision was, that Henry should continue king during his life, and that York and his family should not succeed to the throne till his decease; an explicit proof of the personal esteem felt for "the meek usurper." Here we see a wise desire on the part of the nobles to prevent further contests, as well as an evidence of the increased feeling of independence towards the ruling ecclesiastics, manifested by both lords and commons.

The ambitious queen refused her assent to an arrangement which affected the future prospects of her son, and assembled another army under Northumberland, Clifford, and Somerset, the successors to the leaders of the same name, who had already fallen in these contests. York and Salisbury proceeded northwards. While at Sandal castle, York was beset by Somerset with a force which was three times his own in number. He refused to stay within his fortifications till his son Edward came up, but advanced to Wakefield, and challenged the Lancastrians to battle. They fixed a certain day, but broke their agreement, and surprised the Yorkists at an earlier period, when many had gone forth to forage. The battle, which was fought on December 30, was desperate; but after a short struggle, the superior forces of Somerset prevailed. York was led to an ant-hill, upon which, as on a throne, he was placed; he was crowned with a wisp of grass, hailed king in mockery, and beheaded. Clifford stabbed Rutland, the second son of the Duke, in cold blood, after the battle was over; and he presented the head of the father to Margaret, who welcomed it with a triumphant, fiendish laugh, commanding that it should be decorated with a paper crown, and placed over the gate of York. She then ordered Salisbury to be led to execution. Such acts of cold-blooded murder bring down speedy retribution upon the offenders.

Edward, the young Duke of York, was joined by many friends of his father. He speedily assembled an army in Wales; and on February 2, 1461, he defeated the Lancastrians at Mortimer Cross. The savage practice of putting the leaders to death was now adopted on both sides: in this instance it was to revenge the murder of York and of Rutland.

The queen and her followers advanced towards London. Warwick, with Henry in his charge, arrived at St. Albans. Such dreadful ferocity actuated each party, that they seem only to have sought to shed each other's blood. For this purpose 50,000 combatants were now assembled. Warwick did not manage his troops with ability, and the Lancastrians were now victorious. Henry again became the conqueror's prize, and the town was pillaged. Though the abbot earnestly entreated that it might be spared, yet the plunder of all places south of the Trent had been promised to the queen's followers, and they claimed their reward. We are too apt to read such statements as a matter of course, forgetting all the horrible details included in such an event. One contemporary, a native of the town of Warwick, enumerates sixty villages and hamlets pillaged and laid in ruins in his own neighbourhood. Others say, that the queen's army rushed from York nearly to London, like a desolating whirlwind, ravaging the country for a breadth of thirty miles, even plundering the churches, taking away the repositories of the host, treading under foot the consecrated wafer, and slaying the priests who resisted.

After the battle was over, the queen again showed her sanguinary ferocity, by sending to death such nobles and knights as were taken prisoners. These events, driving the villagers from their homes, and destroying their masters, proved instrumental in destroying the system of feudal slavery, by which the peasants had been bondmen to the soil. At the end of the war few could be pointed out as mere serfs or slaves; for a law which had been previously enacted, declared those free who had lived a year and a day in any town.

The ravages of the Lancastrians between York and St. Albans, were hurtful to their own cause. The citizens of London preparing for desperate resistance, the queen hesitated as to advancing further south. Edward approached, and she decided on withdrawing to the north. The new Duke of York entered London, and was received with loud acclamations. It was now evident that no compromise could be effected. Edward was urged to

claim the throne; he consented; and was proclaimed king by the title of Edward IV.

Thus ended the dynasty of Bolingbroke and the reign of Henry VI., though he survived as a titular king some years longer. The errors and offences of this house have been noticed; and here, as in many cases, both in sacred and common history, the son appears to have suffered rather for the sins of his fathers than his own. But, there was evil enough in the history of each, to vindicate the dealings of Providence towards him; and we know that even when the causes of such events are not apparent now, still they exist, and at the last day it will be seen, that all has been ordered aright. The wrath of man shall praise God; and what we know not now, we shall know hereafter.

The character of Henry has been thus described by a monk who knew him well: "He was a man of pure simplicity of mind, without the least deceit or falsehood; he was very devout and fond of religion; he disliked the sports and business of the world; he thought them frivolous; he loved to read the Scriptures and the old chronicles: his demeanour at church was peculiarly reverential; he was very liberal to the poor; his kindness of feeling was great. He was in the habit of sending epistles of advice to his clergy, full of moral exhortations, to the amazement of many. A bishop who had been his confessor for ten years, declared that he heard nothing wrong confessed, only venial faults." This delineation is a flattering one, though correct in the main. As a prelate, Henry would probably have adorned the church of Rome; as a monarch, he weakened his kingdom, and sunk to an untimely grave. And his tomb at Windsor speaks a moral lesson to the spectator.

Here o'er the' ill-fated king the marble weeps,
And fast beside him, once-fear'd Edward sleeps;
Whom not the' extended Albion could contain,
From old Belerium to the northern main,
The grave unites; where e'en the great find rest,
And blended lie the' oppressor and the' oppress'd.

THE HEBREW AND PAGAN PROPHETS CONTRASTED.

Having established the authenticity of the Pentateuch and the four Gospels, we will now offer a few observations on the general subject of biblical prophecy. A course of thought, like the following, frequently tends to counteract in some minds the authority of prophecy; namely, that all ages have their prophets, and they think that the Hebrews, in this respect, were not distinguished from the pagan nations of antiquity; but that as nations became more enlightened, prophets became less frequent, and finally entirely ceased.

It is true, that all early nations have had their prophets; but the affirmative to the question, Have there been any false prophets? is not, of course, the negative to the question, Have there been true prophets? Rather, the universality of the false proves the necessity and actual existence of the true; for there is no feeling of human nature so universal as that which induces all men in every age to look for prophecy, which has not something in the arrangements of the God of nature to correspond to it. That disposition to worship, which so universally leads uninstructed nations to idolatry, proves that the necessity of religion is founded deep in human nature, and is a strong presumptive argument that there is a true religion adapted to this want of the human soul, and a true God worthy of the love and homage of man.

The question is not, Whether there have been prophets among the pagan nations? but, Whether the prophets of the heathen and of the Bible are alike? or whether the difference between them is so great as to render it impossible to ascribe their prophetic power to the same source?

The Bible continually and earnestly asserts, that there is a difference, and that this difference is so marked, that no one who has had opportunity for observing, is excusable for confounding the one with the other. Let us look at the matter as it actually existed.

For example, in the forty-fifth chapter of Isaiah, after a very circumstantial prediction respecting Cyrus, in which that monarch is called by name, and his various achievements are particularly described, at least 150 years before his birth, the God of the Hebrews is represented as declaring that he had uttered this prediction for the express purpose of showing to Cyrus, that Jehovah, the self-existent, the everlasting God, was the God of Israel, Isaiah xlv. 1—7. He then contrasts this creative power, these open, undisguised declarations, and this undeviating truth, with the crooked cun-

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ning and falsehood of the pagan deities, ver. 18, 19. Finally, all nations are called to come together, and this prophecy is given as an instance of foreknowledge altogether beyond the reach of the heathen prophets, and a triumphant proof that Jehovah alone is the true God, and his prophets the only true prophets, ver. 20—22. Let us follow out the train of thought here suggested, by contrasting the Hebrew with the heathen prophets, let us show that the former only have a just claim to Divine inspiration.

1. *Prophets of Ancient Greece.*

The Grecians were the most celebrated for learning and refinement of all the ancient nations, and the epistles of Paul contain frequent allusions to the fame of their wisdom. The Greeks had their prophets; and to them the Greek moralists, lawgivers, and magistrates, submitted the most important questions, and their decisions were considered sacredly binding by this polished and philosophic people. The prophets of ancient Greece, then, being the best which the heathen world can furnish, will be selected as the subjects of comparison with the prophets of the Bible.

To enable the reader to make the comparison for himself, I will attempt to give a brief and faithful description of the Greek prophets, as represented by the Greek historians, and of the Hebrew prophets as they are represented in the Bible.

There can surely be no objection to this mode of investigating the subject; it allows each to give its own account of those for whom it claims Divine inspiration, and to whom it attributes a knowledge of future events.

There was one class of sacred persons among the ancient Greeks, called *theomantes*, who may, in some respects, be called prophets: they rambled through the country, giving people advice in regard to their moral duties, chanting passages of the poets, and pretending to lay open the secrets of futurity.

Poorly qualified as these theomantes were for religious teachers, it was to them alone that the common people of these celebrated Greeks could look for spiritual guidance. None of their instructions have descended to our times. (Compare Eichhorn's Introduction to the Old Testament, in German, preface to vol. 4.)

2. *Greek Oracles.*

Those, however, who can more properly be compared with the Hebrew prophets, were the attendants on the various oracles. These separated themselves from all human society, and withdrew to some solitude, where a thick wood, a craggy mountain, a waterfall, or a dark cave, might awaken the awe of their superstitious countrymen, and impose upon them the belief that there was the residence of some pagan deity. There they lived in mysterious retirement, and pretended to hold intercourse with the invisible world. Thither must all repair who wished to consult them; and no one could obtain an answer to his inquiries, till he had presented gifts to the god of the place, and passed through various ceremonies, all calculated to put him in such a state of shuddering apprehension, as would prevent his detecting an imposition, or suspecting the artifice of which he was made the dupe. The responses were then given, artfully expressed in hexameter verse by poets hired for that purpose; but their language was so chosen, that it was always more or less equivocal, and often unintelligible. Many of these oracles, or prophecies, have been preserved by the Greek historians, though no two writers, professing to record the same oracle, ever give it in precisely the same words.

We have enough of these remains to enable us to form an estimate of the subjects, which were usually laid before the Greek prophets, and of the manner in which they disposed of them. Religion or morality is very seldom mentioned. They were principally occupied about public enterprises, emigrations, wars, and controversies between states and individuals. When disputes were to be settled by them, they were often bribed by one party to give an opinion against the other; if they desired to keep in favour with both, they would procrastinate and evade the question. When the issue of public enterprises was demanded, they sometimes learned from men of experience in public affairs what reply it would be most safe to give; or their answers were so artfully couched, that they could bear opposite meanings. If these expedients failed, they referred the inquirer to the superstitious arts of magic and astrology; or they evaded the point by raillery, and instead of instructing by

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prophecy, amused or irritated by sarcasm; and when every resource of cunning was exhausted, they would say that their god was angry, and refused to answer. What is remarkable in all their prophecies, they seldom, if ever, have any good moral tendency. Virtue is not rewarded, nor vice punished. Power is flattered, however unjust; and weakness is left unprotected, however innocent. The grossest idolatry is always inculcated; and, in many instances, the horrid superstition of sacrificing human beings to the infernal gods, is expressly enjoined.

An extravagant pecuniary reward was generally the only condition on which these pretended prophecies could be obtained.

Every part of this description of the Greek prophets can be verified by quotations from the Greek historians. (Compare Potter's Antiquities of Greece, Book ii. chap. 7—12.)

3. *Oracles of Apollo and Trophonius.*

It is obvious from history, that some of the most celebrated of the Greek oracles owed their celebrity to exhilarating or stupifying gases issuing from subterranean caverns. Of all the oracles of ancient Greece, none was more confided in than that of Apollo, at Delphi. The manner of its discovery is thus related by Diodorus Siculus, (Book xvi.) "Upon Mount Parnassus, where goats were wont to feed, there was a deep cavern with a small narrow mouth, to which, when any of the goats approached, they began immediately to leap, after a most unusual and antic manner, uttering strange and unheard of sounds. The goatherd observing this, and wondering what should be the cause of it, went himself to view the cavern, whereupon he also was seized with a like fit of madness, leaping, and dancing, and foretelling things to come."

The effect of this gas on the officiating priestess is thus described by Archbishop Potter, in the work already quoted:—"She was no sooner inspired, but she began immediately to swell and foam at the mouth, tearing her hair, cutting her flesh, and in all her other behaviour appearing like one frantic and distracted." In some instances the paroxysm was so violent as to occasion immediate death.

Pausanius informs us, that "he who desired to consult the oracle of Trophonius's cave at Lebadea, in Bœotia, was obliged to undergo various preparatory ceremonies, which continued through several days; he was to purify himself by various methods, and to offer sacrifices to many different deities; he was then conducted by night to a neighbouring river, where he was anointed and washed; he afterwards drank of the waters of forgetfulness, that his former cares might be buried; and of the water of remembrance, that he might forget nothing of what he was to see. The cave was surrounded by a wall; it resembled an oven; was four cubits wide and eight deep; it was descended by a ladder; and he who went down, carried with him cakes made of honey; when he got down, he was made acquainted with futurity." See Beloe's Herodotus, vol. i. page 36. He was always pale and dejected on his return, and thence it became proverbial to say of a melancholy man, that he had consulted the oracle of Trophonius.

It was in contrast with oracles such as these, that Jehovah declares, "I have not spoken in secret, in a dark place of the earth;" and in contrast with the difficulty of obtaining the oracular responses, and their ambiguous and unintelligible language when obtained, (which we shall now proceed to notice,) that he makes the additional declarations, "I said not unto the seed of Jacob, Seek ye me in vain; I the Lord speak righteousness, I declare things that are right;" that is, as Bishop Lowth translates it, "I speak truth, and give direct answers," Isa. xlv. 19.

The time of consulting the Delphic oracle was originally only during one month of the year, and generally on the seventh day of the month, that being considered Apollo's birth-day; and when responses were given most frequently, they could never be obtained oftener than once a month.

"Whoever went to consult the oracle," says Potter, "was required to make large presents to the god, whereby it came to pass that this temple, in riches, splendour, and magnificence, was superior to almost all others in the world." "It was the custom also to offer sacrifices to Apollo, in which, except the omens were favourable, the prophetess would not give any answer. At the sacrifices there were five priests that assisted the prophets, and another priest also that assisted the prophetess in managing the oracle." Potter's Antiquities of Greece, Book ii. chap. ix. As those

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priests were the sole judges of the omens, it was very easy for them to evade every question respecting which it might be inexpedient for them to commit themselves.

Among the presents which Crœsus sent to this oracle, Herodotus (B. i. ch. 50, 51) enumerates the following: "One hundred and seventeen tiles of gold, four of which were of the purest gold, each weighing one talent and a half; the rest of inferior quality, but of the weight of two talents; also a lion of pure gold, weighing ten talents; two large vessels or goblets, one of gold and the other of silver, the former weighing nearly nine talents, and the latter containing six hundred amphoræ; a female statue of gold, three cubits high," and many other things of equal value.

To the oracle of Amphiarus in Thebes, he also sent "a shield of solid gold, with a strong spear made entirely of gold, both shaft and head. These were all," continues Herodotus, "within my memory preserved at Thebes, in the temple of the Ismenian Apollo."

They that consulted this oracle of Amphiarus were to abstain from wine for three days, and from all nourishment for twenty-four hours. They then sacrificed a ram, on the skin of which they lay down to sleep, and received responses in their dreams.

4. *Character of the Oracular Responses.*

The general character of the oracular responses is described by the pagan Cicero, with entire fidelity, in the following paragraph from his work, De Divinatione, (ii. 56.)

"But now I come to thee, sacred Apollo, who dwellest at the centre of the earth, whence first proceeded the wild and superstitious sound. For Chrysippus has filled a whole volume with thy oracles, partly false, as I think; and sometimes true by mere accident, as it frequently so happens in other cases; and sometimes enigmatical and obscure, so that the interpreter needs to be interpreted, and the response referred back to the oracle; and often purposely and artificially ambiguous. For when this response came to the richest king of Asia, 'Crœsus by crossing the Halys shall destroy a great power,' he supposed that he was to destroy the power of the enemy, but he destroyed his own. Whatever might have been the event, therefore, the oracle would have remained true."

Herodotus informs us, B. i. c. 91, that when Crœsus, after his defeat, made complaint to the priestess of Apollo, that she had deceived him in the oracle referred to in this passage of Cicero, she replied, "That Crœsus was not justified in his complaints; for Apollo had declared, that if he made war against the Persians, a mighty empire would be overthrown; the real purport of which communication, if he had been anxious to understand, it became him to have inquired whether the god alluded to his empire, or the empire of Cyrus; but that not understanding the reply which had been made, nor condescending to make a second inquiry, he had been himself the cause of his own misfortune." By this evasion, the unfortunate king found that he had been outwitted, and was obliged to submit in silence.

To illustrate still further the nature of the subjects which were usually laid before the Greek prophets, and the manner in which they disposed of them, the following examples are selected from Herodotus:—

"On a certain occasion, the Lacedemonians," says Herodotus, "dissatisfied with the languor and inactivity of peace, and conceiving themselves, in all respects, superior to the Tegeans, they sent to consult the oracle concerning the entire conquest of Arcadia. The Pythian thus answered them:—

Ask ye Arcadia? 'tis a bold demand,
A rough and hardy race defend the land.
Repuls'd by them one only boon you gain,
With frequent foot to dance on Tegea's plain,
And o'er her fields the meas'ring cord to strain.*

"No sooner had the Lacedemonians received this reply, than, leaving the other parts of Arcadia unmolested, they proceeded to attack the Tegeans, carrying a quantity of fetters with them. They relied on the evasive declaration of the oracle, and imagined that they should infallibly reduce the Tegeans to servitude. They engaged them and were defeated: as many as were taken captive were loaded with the fetters which themselves had brought, and were thus employed in laborious service in the fields of the Tegeans." B. i. c. 66.

The Lacedemonians, after having been

* The above is Beloe's translation. Literally rendered, the latter part of the oracle reads thus: "But I will not refuse you. I will grant you to dance on Tegea, struck with your feet, and to allot the fine soil with the cord."

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repeatedly defeated by the Tegeans, again sent to consult the Delphic oracle. "The Pythian," says Herodotus, "assured them of success, if they brought back the body of Orestes, son of Agamemnon. Unable to discover his tomb, they sent a second time to inquire concerning the place of his interment. The following was the oracular communication:—

"A plain within the' Arcadian land I know,
Where double winds with fore'd exertion blow,
Where form to form with mutual strength replies,
And ill by other ills supported lies;
That earth contains the great Atrides' son;
Take him and conquer: Tegea then is won."

I give the oracle in the translation of Beloe, but the last line, on which the import of the whole depends, literally rendered, reads thus:

"Having taken him," that is, the body of Orestes, "thou shalt be a helper of Tegea."

The Lacedemonians were as much in the dark as ever in respect to the place where they might find the body of Orestes, but they continued their search for it without intermission. At length, one of their distinguished countrymen, named Lichas, being in Arcadia on public business, and happening to visit a smith at his forge, observed with particular curiosity the process of working the iron. The man took notice of his attention, and desisted from his labour. "Stranger of Sparta," said he, "you seem to admire the art which you contemplate; but how much more would you be excited, if you knew all that I am able to communicate! Near this place, as I was sinking a well, I found a coffin seven cubits long. I never believed that men were formerly of larger dimensions than at present; but when I opened it, I discovered a body equal in length to the coffin. I correctly measured it, and replaced it where I found it."

Lichas, after hearing this relation, was induced to believe that this was the body of Orestes, concerning which the oracle had spoken. He was further persuaded, when he recollected that the bellows of the smith might intimate the two winds; the anvil and the hammer might express one form opposing another; the iron also, which was beaten, might signify ill succeeding ill, rightly conceiving that the use of iron operated to the injury of mankind.

The Spartans, by stratagem, got possession of the bones, and Tegea was conquered. Herodotus, B. i. c. 68.

Both the above oracles, particularly in the original Greek, are entirely ambiguous, and would have been equally true in each case, whether the Spartans or Tegeans had conquered. They also sanction glaring injustice; for it is not even intimated to the Spartans, that their projected unprovoked attack on the peaceful Tegeans, for the sake of robbing them of their lands and making them slaves, was contrary to every principle of right. Nor does the historian himself seem to think it wrong for the Spartans to make war because they were tired of peace, nor a defect in the oracle that it has nothing to say on the subject of moral obligation. Politics, and not religion, war and revenge, not peace and good-will, were the topics most acceptable to the prophets of ancient Greece.

Herodotus also (B. vii. c. 140—142) details the oracles given to the Athenians, respecting the issue of the Persian invasion, and also several others in different parts of his history. They are all of the same general character with those already described.

It is well known that the Greek oracles were frequently bribed by public men to give such answers as would promote their own schemes. Plutarch informs us, in his life of Themistocles, that this general, "perceiving that he could not, by the force of human reason, prevail with the multitude, set his machinery to work, as a poet would do in a tragedy, and had recourse to prodigies and oracles." And Demosthenes publicly complained, that the Delphic oracle, being bribed by Philip, *philipized*. "He put the Thebans in mind of Epaminondas, and the Athenians of Pericles, how they reckoned such things (as oracles and prodigies) the mere pretexts of cowardice, and pursued the plan which their reason had dictated." See Plutarch's Life of Demosthenes.

Such was the estimation in which the Greek oracles were held by the most intelligent of the Greeks themselves. And do you not in this description of the Greek prophets, as given by the Greek historians, plainly discover all the features of selfishness, imposture, and crime?

How easy for these pretended prophets to deceive, if they chose; and how much their whole system of operation appears like an attempt to conceal a profitable fraud!

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Surely "they have no knowledge that set up the wood of their graven image, and pray unto a god that cannot save: he feedeth on ashes: a deceived heart hath turned him aside, that he cannot deliver his soul, nor say, Is there not a lie in my right hand?" Isa. xlv. 20; xliv. 20.—*From C. E. Stowe.*

(To be continued.)

THE COTTON MANUFACTURE.—No. II.

ENGLAND has excelled all countries in the beauty and amount of her manufactures. This may be in part traced to the superior industry of its inhabitants, but also to the great abundance of iron and coal. If we attentively consider any kind of manufacture, we shall at once perceive, that no country can excel in its production unless it has resources within itself for carrying on the processes required. For the production of cotton fabrics of all sorts, there must be a means of obtaining a sufficient water power, coal and iron. The arrangement of mineral substances is such, that in nearly all places where coal is obtained, iron may also be found. This circumstance is one of great importance, and gives us an advantage over other countries. Coal is exceedingly abundant in many parts of England and Wales, and we are under no apprehension of exhausting it.

The choice of the southern part of Lancashire, as the site of our manufacturing industry, is justified by experience. Mr. Baines gives a sketch of the advantages there obtained, which is sufficiently important to be mentioned in this place. The tract lying between Ribble and the Mersey, (he says,) is surrounded on the east and north by high ranges of hills, and has also hills of some magnitude in the Hundreds of Blackburn and Salford; owing to which cause, the district is intersected by a great number of streams, which descend rapidly from their sources towards the level tract in the west. In the early part of their course, these streams and streamlets furnish water-power adequate to turn many hundred mills; they afford the element of water, indispensable for scouring, bleaching, printing, dyeing, and other processes of manufacture. No less important is the great abundance of coal found in the very same district. Beds of this invaluable mineral lie beneath almost the whole surface of Blackburn and Salford hundreds, and run into West Derby to within a few miles of Liverpool. Of the equally indispensable mineral, iron, the southern part of Lancashire is nearly destitute; but being at no great distance from the iron districts of Staffordshire, Warwickshire, Furness, and Wales, with all of which it has a ready communication by inland, or coasting navigation, it is as abundantly, and almost as cheaply supplied with this material, as if the iron was got within its own boundaries.

To these advantages, we may add that of an easy communication with the excellent port of Liverpool, which gives a great facility in receiving the raw material, and shipping the manufactured goods. These are the advantages which have given to Manchester and its neighbourhood that pre-eminence in manufacturing industry, for which it has been long celebrated. The woollen and linen manufactures, as we shall afterwards see, have been carried on in Lancashire for a very long time, and, in fact, prepared the way for the introduction of the cotton.

Until about the year 1760, the machines used in the manufacture of cotton in this country were very little superior to those employed in India. About the year 1740, the fly-shuttle was invented by a Mr. Kay, which greatly facilitated the process of weaving. This invention however was considered at the time injurious rather than beneficial; for the great hinderance to the progress of the manufacture had previously been a want of sufficient yarn; for the "one-thread wheel, though turning from morning till night, in thousands of cottages, could not keep pace either with the weaver's shuttle, or with the demand of the merchant."

In the year 1767, a great improvement was made in the mode of spinning, by the invention of the spinning jenny. This was done by James Hargreave, a poor and illiterate weaver. The idea of this machine is said to have been suggested to him from observing a common spinning-wheel, which had been accidently overturned, continue in motion as it lay on the floor. The spindle was thrown by the fall into an upright position, and it suggested to him, that if a number of spindles could be placed in the same manner near each other, many threads might be spun at the same time.

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This he at last effected, and constructed a jenny of eight spindles, turned by bands from a horizontal wheel. For some time Hargreave kept his invention a secret, and it was used only in his own family, to spin the weft required for his own weaving. It could not, however, long remain unknown, and when discovered, the spinners were so enraged, fearing it would diminish their employ, that they broke into his house, and destroyed the machine.

In the year 1768, Hargreave went to Nottingham, and entered into partnership with Mr. Thomas James, a joiner, who obtained sufficient money to erect a mill; and in 1770, he took out a patent for his invention. The patent was "for a method of making a wheel or engine, of an entirely new construction, and never before made use of, in order for spinning, drawing, and twisting of cotton, and to be managed by one person only, and that the wheel or engine will spin, draw, and twist sixteen or more threads at the same time, by a turn or motion of one hand, and a draw of the other." In the patent-deeds it is described in the following terms:—"One person with his or her right hand turns the wheel, and with the left hand takes hold of the clasps, and therewith draws out the cotton from the slubbin box; and being twisted by the turn of the wheel in the drawing out, then a piece of wood is lifted up by the toe, which lets down a presser-wire, so as to press the threads so drawn out and twisted, in order to wind or put the same upon bobbins which are placed on the spindles."

The ingenious inventor, however, did not derive the advantage he ought to have received from his machine. His patent was invaded, an association was formed against him, and it has been said he died in obscurity and distress: this, however, is not true.

In the year 1769, Arkwright took out a patent for spinning by rollers. The invention has been attributed to him as an original discovery; but from the researches of Mr. E. Baines, it is quite evident that John Wyatt was the author of the contrivance. In the year 1738, a patent was taken out by Lewis Paul, a foreigner, who was at the time in partnership with Mr. Wyatt, for spinning by rollers. The patent was taken out by Paul, in all probability, because Wyatt was in great pecuniary difficulties. In a letter written by him, when a prisoner for debt, to Sir Leicester Holt, praying him to support a bill then before parliament, for the relief of insolvents, he says, "I am the person that was the principal agent in compiling the spinning engine, though I had not the honour to wait upon Sir Leicester, either of the times he was to see it." Other evidence is adduced by Mr. Baines, to prove that Wyatt was the inventor; and from the whole he draws the conclusion, that, although Arkwright probably had not seen Wyatt's machine, yet he was acquainted with the principle. How much Arkwright owed to his predecessor can only be matter of conjecture; that he thus learned the principle of spinning by rollers is certain, as he himself declares as much in the "Case," which he drew up to be presented to parliament in 1782."

Arkwright, however, was a man of no ordinary genius. He was born at Preston, in Lancashire, in the year 1732, of poor parents, and was the youngest of thirteen children. He was brought up as a barber, and continued to practise his calling, and obtain his subsistence by it, up to the time that he made his discovery. At Nottingham, to which place he removed, he prevailed on Messrs. Wrights, the bankers, to advance him money for the completion of his purpose; but they finding that the sum required was greater than they had anticipated, referred him to Mr. Need, a gentleman already engaged with several patent inventions. Application was accordingly made to him, and the model of the machine was presented to Mr. Strutt, of Derby, his partner, who was so pleased with the invention, that he recommended Mr. Need, to close an engagement with Arkwright, assuring him that the model only required the adaptation of some parts which the inventor, from want of mechanical knowledge, had not been able to accomplish.

In the year 1769, Mr. Arkwright obtained his patent, and in connexion with Messrs. Need and Strutt, established a mill at Nottingham, which was worked by horse power. This, however, was found inconvenient in many respects, and in 1771, another mill was erected at Cromford, in Derbyshire, in which water was employed as the moving power.

We must now, however, turn from the historical details, and endeavour to

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give the reader an account of the different machines employed in cotton spinning. This, however, is not by any means an easy task, so complex and varied is the apparatus at present used in the manufacture.

When the wool has been carefully picked, which is sometimes done with a machine, and sometimes by hand, it is carried to the carding engine, which consists of two or more large cylinders, covered with cards, and revolving nearly in contact, but in opposite directions. The cylinder nearest to the feeder is, according to the present arrangement of the machinery, surrounded by a fixed lining, covered in like manner with cards, by which the cotton is carded and placed on the finishing cylinder.

In the year 1762, when Mr. Peel, the father of the present Sir Robert Peel, erected his carding machine, the cotton was taken off the receiving cylinder by hand-cards. Several alterations were made in this process from time to time, and when Arkwright commenced his spinning, it was done by a roller with tin plates round its circumference, similar to the floats of a water-wheel. This was a rude contrivance, and injured the cotton so much, that Arkwright substituted in its place a plate of metal, toothed like a comb, which was moved rapidly by a crank in a vertical position, and by rapid and gentle strokes upon the teeth of the cards, detached the cotton from them in an uniform fleece. He also introduced in place of the sheet cards, those which are wound round a cylinder, so as to produce a continuity of the fleece. "The taking off the cotton from the cards in this manner, is one of the most beautiful and curious operarations in the process of cotton-spinning; and although the crank, which forms a part of the apparatus, had perhaps been used in some way or other, previous to the date of Mr. Arkwright's second patent, as was urged in the action for having it set aside, the comb for taking off the fleece, and the spiral card, which produces its continuity, were inventions indisputably his own."

When the carding has been completed, the cotton undergoes a process called drawing, which is intended to arrange the fibres, to give them uniform structure, and a parallel direction. The machine employed for this purpose consists of two pairs of rollers, the first pair in contact with each other, and revolving slowly, and the second at a little distance with greater velocity. Each of the lower rollers is fluted longitudinally, and the upper ones are nearly covered with leather. Now, when a carding is past through the first pair of rollers, no effect is produced beyond that of compression, but when it enters the second, which moves faster, it is drawn out two or three times finer than it was when it passed the first pair.

The drawing being completed, the cotton is sent to the roving frame, where a process very similar to that just described is adopted, except that a slight twist is given to it, converting it into a loose thread as it leaves the rollers. Young children are then employed in winding the rove upon bobbins by hand, from whom it is taken to the spinning frame.

We must now close our account of the cotton manufacture, by a notice of the mule jenny; so called, because it combined the principles of Arkwright's water-frame and Hargreave's jenny. It was invented by Mr. Samuel Crompton, of Bolton, in the year 1775, but did not come into general use for some years after. Its advantage was in obtaining a finer grist and quality of yarn than could be obtained by any of the other machines. It consists of a system of rollers coupled together, and the rove when drawn through them, in its conversion into thread, is received on spindles, revolving like those of the jenny. The inventor did not take out a patent, but the parliament made him a grant of five thousand pounds. It has since been greatly improved, and has even been made to act without any manual assistance, except that of children, who are employed to join the broken threads. Mr. William Strutt, of Derby, was the first person who constructed a self-acting mule.

"NOT TO BE TRUSTED."

My friend Julia was endeavouring to aid me in placing some large and heavy books upon a shelf, whose capability of enduring weight had not been hitherto tried; but after a few volumes had been arranged, the sudden bending of the board made me exclaim, "No more, Julia, for this shelf is *not to be trusted.*" She started at my exclamation, which surprised me; and when I had descended from my elevated position, and we were

seated near the parlour fire, I inquired the reason of her emotion from so trivial a cause. "I will tell you," she replied, and then gave me a long detail of the reason, which, as I found interesting and instructive, will, if a little condensed, prove, I trust, not altogether unacceptable to readers in general.

"The words you uttered," said she, "form one of many painful reminiscences. When I was but a child, my mother discovered some trifling peculation one day among her winter store of sweetmeats; of which being guiltless, I did not join in the noisy vociferations of innocence that were indulged in by my elder brother, the real culprit, as was afterwards proved. For when my turn to be questioned came, I simply said I had not taken it, when George loudly exclaimed, 'Don't believe her, she is *not to be trusted.*' This coming from a brother I loved so truly, threw me into an agony of grief; and even the tender soothings of a mother's love following the discovery of George's guilt were hardly sufficient to calm me. The remembrance of the taunting untruth of my brother occasioned me many an after pang.

"In that matter I was guiltless; but how often since then have I experienced the deceitful nature of my own heart; and as I grew up, confident in integrity of purpose, how indignant should I have felt, had any one ventured to whisper, 'She is *not to be trusted.*' But thanks be to God, that what I would not endure to learn from others, he himself has taught me by heartfelt experience; thus leading me by a way that I knew not, to discover that of myself I am not even sufficient to think a good thought. How often, in the days of my youthful folly, when I have felt painfully how weak were all my best resolutions in overcoming any fault; how like that shelf have I been—I was '*not to be trusted;*' my resolve seemed strong enough to bear any weight, but failed when tested. It would take long were I to recount all the painful discipline which our heavenly Father has seen fit to inflict upon me before I learned the lesson of my own weakness. The Lord leads each of his people in the way best for them, in the way that exactly suits their peculiar constitutions and nature; and I verily believe that He who does not afflict his children for his own pleasure, would not so often employ the rod, if by any other means we could learn our folly. You will not wonder, then, at my feelings on hearing a repetition of the expression which not only caused my first great childish sorrow, but also in a measure has led me to trust alone in the Lord, in whom is all righteousness and strength."

I found on reflecting on my friend's account of herself, I had received a useful lesson. Since that time, when inclined to enter on an undertaking in my own strength, before seeking counsel of the Lord, "*not to be trusted*" has stared me in the face, as if written on the wall before me. And often, when the wilfulness of my nature has made me needlessly encumber myself, how have I experienced the evil consequences of resting on self!

And now may I say, in conclusion, a few words to the readers of this paper. My dear friends, have you ever considered that you were "*not to be trusted?*" Yes, you. Do not be angry, but reflect at this moment on what are you resting for eternity? What are your hopes for happiness hereafter? If the Lord should say to you, "This night thy soul shall be required of thee," can you in humble confidence say, "Even so, come, Lord Jesus?" It is not by any thing done by us, or wrought in us that we can hope for salvation. It is only on the one foundation laid in Zion, even Jesus Christ, that sure hopes for eternal joy must be laid. It is only for what Christ has done and suffered for sinners, as sinners, and in no other character, that you or I can have any hope. Now the question is, is it on Him or on yourself that you are trusting? I am sure that if you have come to Jesus as a vile, unworthy sinner, God's Holy Spirit has taught you that your own heart is "*not be trusted.*"

And even those who are established in the ways of God, how should they give earnest heed to what he has taught them, lest they, too, should be deceived by the wiles of the devil, and forget that in their flesh dwelleth no good thing! And how the consciousness of all this should endear the Saviour! How precious should it make his atoning sacrifice! And at every fall into evil, how instantly should it make us flee to the blood that cleanseth from all sin. We should not forget that St. John's blessed Epistle was written not only to little children, but also to young men and

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fathers; and this shows us that the truths we first received in our Christian course are as necessary for our comfort and sustenance in the more advanced period of our journey, as at the beginning. May the Lord strengthen us more and more in his grace, and cause that every daily discovery of our own utter worthlessness and insufficiency may lead us the more to trust in Him at all times, who has said to each of his people, as well as to his holy apostle,

"My grace is sufficient for thee."

Brighton. Q. H. Z.

ROSE AND CROWN LANE;

OR,

A SKETCH OF MY NEIGHBOURHOOD.—No. VI.

No. 6, is occupied by Mr. James West, the baker, as honest and industrious a man as can be found in our parish, or the next to it. His wife is no less kind-hearted, than managing and cleanly. This is saying a great deal for her; but I am sure any one who has an opportunity of observing her house, her children, her manner of speaking on all occasions, and her constant readiness to do a good turn for the neighbours, will readily admit that it is no more than her due.

The very limited extent of the premises will not admit of the baking being conducted on an extensive scale. And, indeed, my neighbours are but beginners on their own account, and seem to be fully convinced of the wisdom of beginning on a humble scale according to their means, rather than, by attempting at first to make a great show, to run the hazard of ruining themselves, and injuring others.

James West was for many years foreman to a considerable fancy bread and biscuit baker in our town, and was much respected by his employer as a steady, industrious, and trustworthy servant. He had good wages, and saved money in that situation; and probably would not have left it, at least for some years to come, but for one disadvantageous circumstance connected with it, which he could neither overcome nor endure. Every situation in life has its inconveniences, and where things on the whole are satisfactory, it is seldom wise for persons to unsettle themselves because all is not exactly to their mind. There may, however, be only one thing of which to complain, and yet that may be of such importance, as to justify a relinquishment of all the rest. This must be the case, if the one objectionable circumstance be of such a nature as to involve transgression of the commands of God, or to deprive of the means of grace. "For what shall it profit a man, if he shall gain the whole world, and lose his own soul?" Mark viii. 36.

It was the pressure of this all-important question that brought James West to the decision that he must leave Mr. Davis's employ. When first he entered it, that question had never given him any great concern. I believe he was quite satisfied with himself for his honesty and industry in attending to his master's business, his civility to the customers, and his quiet and inoffensive deportment among his work-fellows. Perhaps it never occurred to him, that all these good qualities might exist, and all this proper conduct might be pursued, without any regard to the will of God, and without any reference to the only way in which a sinner can be accepted and saved. Perhaps he thought, as many thousands do think, that his honesty and civility constituted his righteousness; and that his diligence in business excused him from attention to religion. Certain it is, that he used to be seen in his dusty dress all Sunday morning, just as busy as any other day in the week, making cakes, and baking dinners for the neighbours. In the afternoon, when he had done work, he was hot and tired, and more inclined to take a nap than to attend a place of worship; and the evening, according to the custom of many persons in his rank and circumstances, he considered himself quite at liberty to spend in going abroad for air and recreation. Thus the whole Sabbath was spent in neglect of the public ordinances of religion. Since "faith comes by hearing," and the blessing of God is promised to those who wait on Him, while things went on in this manner, it was not to be supposed that West and his family gained much religious improvement or consolation. They thought themselves Christians, and were very well satisfied; and so are thousands more upon no better grounds. Should the question be presented to them, What are your hopes for another world? the answer in all

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probability would be, "We pay our debts, and live in peace with our neighbours; and if we are not safe, what is to become of thousands?" This is very different from what the Bible says. It tells us of a broad way, that leads to destruction, and of the thousands that crowd along it; and of the strait gate and narrow way that lead to life eternal, and that there are few who find it. It tells us, too, that except our righteousness exceeds the righteousness of thousands who think very highly of themselves, we shall in nowise enter the kingdom of heaven. These solemn statements, if duly attended to, would set many people seriously thinking about their own condition, and make them afraid of saying to themselves, "Peace, peace, when there is no peace."

Suspicions of this kind were awakened in the mind of Mrs. West; by what particular means I cannot say. However, when she began to apprehend that all was not right, she naturally became desirous of gaining information and direction on so important a matter. Her steps on the sabbath were directed to the sanctuary of God: and having there "heard words whereby she might be saved," even the word of the gospel that directed her to Jesus the Saviour of sinners, her constant concern was that she might herself improve in the knowledge of Christ, and that the attention of her husband might be aroused to the same important subject. Her influence was quiet and gentle, yet powerful and salutary. One step after another was taken in rescuing the sabbath from its former worldly pursuits and pastimes, and in devoting the sacred hours to the things that belong to the soul's everlasting peace; and every advancing step tended to the fuller conviction that "Wisdom's ways are ways of pleasantness, and all her paths are peace." But difficulties as well as delights form a part of the Christian's lot. These difficulties sometimes are the result of former habits and practices. In abandoning those things which were formerly a source of profit or of pleasure, the new convert finds himself called upon to deny himself, and take up his cross daily, and follow his Master. He may not immediately distinguish his duty, or perceive the evil and danger of long-continued habits; but when once these things are perceived, the habits will prove as thorns in the sides, or as gravel to the teeth.

At first, James West was contented with going on the evening of the sabbath to accompany his wife to a place of worship; but as his relish for good things increased, he began to regret the weariness which unfitted him for taking the benefit of the afternoon; and he sighed over the hardship of toiling all the sabbath morning at his daily calling, instead of being able to employ the whole as a day of sacred rest and enjoyment. Our circumstances, however unfavourable in themselves, may generally be improved or aggravated by our own management. As James West began to feel the value of the sabbath, he soon found that many little things which he had been accustomed to do in the way of business, might just as well be done on the Saturday or the Monday. A little contrivance in these matters divested the sacred day of much unnecessary labour, left him many a minute or two in the bakehouse for quiet meditation, or for reading a few verses from a Testament which he kept at hand, and enabled him to leave work earlier, and with much less fatigue, than he had formerly done; so that he was able to turn the afternoon to good account. Yet, even this did not satisfy him. How could he reconcile it with the command, "Six days shalt thou labour, and do all thy work: but the seventh day is the sabbath of the Lord thy God; in it thou shalt not do any work?" He spoke to his master about the matter, and begged him to shut his shop and oven on the sabbath. His master said it was nonsense; a likely matter, indeed, that he should shut up his oven just the day that he took more money for baking than all the week beside! and then, too, if he offended and turned away his customers on the Sunday, it was not likely that they would come again on the Monday.

"Perhaps, Sir," said West, "if they knew that we did not bake on a Sunday, they would contrive to get their baking done on Saturday."

"Not they," replied the master, "they would go elsewhere, and we should lose all our custom. Besides, it is not merely the baking; only think how much money we take on a Sunday morning for flour, rolls, and cakes."

"Yes, Sir, but then if the money is taken in the way of sinning against God, it cannot come with a blessing." This seemed rather to stagger the mas-

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ter. After a moment's pause, he collected himself and replied—

"I think, James, you are more nice than wise on this business; people will have hot dinners on a Sunday. It is the only day in the week that many families are all at home together, and it is natural they should like a meal in comfort."

"True, Sir, and it is hard that a poor baker and his family cannot have their meal in comfort, and go together to the house of God, as a Christian family ought to do. But never, Sir, since I have been a married man, have I been able to go with my wife to church on a Sunday morning."

"Well, James, that is rather hard, to be sure; but you know I give you good wages; and as you have a growing family, I shall not object to give you two or three shillings a week more. You have been a faithful servant to me, and you deserve it: I am glad to see you thriving and doing well for yourself."

"I thank you, Sir, for your kindness; you have always been a good master to me; but I was thinking Sir, of proposing, if you would please to let me have my sabbath to myself, to give up a seventh part of my wages. My wife and I have agreed that it would be better for us to live a little closer, if by so doing we could but enjoy the day of rest. As I know that when I began working for you, it was quite expected that I should work Sundays as well as week-days—I cared nothing then about it—it is but just, that if you let me have my time, I should give up so much of the pay; but at the same time I will endeavour and continue to work the more on Saturday and Monday, so that you shall not be a loser by it."

"Well, James, that certainly is very honest of you, and proves that you are in earnest in your scruples, which I believe is not often the case with those who profess to be righteous over-much."

"As to that, Sir, I can't say anything about others: for my own part, it is little that I profess; but I do wish to live in the fear of God, and with another world in view as well as this. As to gain, I do not think we should be losers in the longrun for working six days instead of seven; for it is a sad pull upon health and strength to be always at it. And as God has commanded a sabbath of rest for even the brutes, who cannot enjoy a religious sabbath, it seems as if he had a merciful regard to the rest of our bodies, as well as to the profit of our souls."

"Well, perhaps so. I should have no objection myself to a day's leisure; and if everybody else in the trade will agree to shut up their ovens, I will shut up mine, and not dock you in your wages either. But hark ye, James; if we don't break the sabbath, we shall drive a pretty many more to do it instead. Here are three of us, besides the boy, employed in fetching, and baking, and carrying home dinners; but if we shut up, and went to church, there would be at least fifty people kept at home to dress their own. What do you say to that?".

"Why, Sir, I must say that I have thought a great deal about it. I know that there are several poor women and servants who may go to a place of worship, but who, if we did not bake, must cook their dinners at home, or go without; and I should be very sorry to put them to inconvenience; though, as my wife often says, if they must have a hot dinner on Sundays, there are plenty of things that may be dressed just as well if all the folks were at church as if they were standing all the time to watch them. But where we have one dish from those who really send it to us, that they may have a better opportunity of keeping the sabbath themselves, we have a dozen from persons who care nothing about keeping it at all, but who spend the time either in household drudgery, or fine dress, and gossipping. Indeed, Sir, when I carry home the dinners, and see them so improperly employed, I cannot help thinking that we are not only breaking the sabbath ourselves, but helping others rather to break it than to keep it."

Such conversations took place more than once or twice between Mr. Davis and his man James, who was sometimes in hope that his master had begun to think seriously about the matter, and was almost inclined to adopt his proposal. In truth, he had strong convictions in his mind, that he ought to seek first the kingdom of God and his righteousness; but the worldly-minded consideration prevailed, "What shall I do for the hundred talents?" 2 Chron. xxv. 9; and he came to the conclusion that, right or wrong, he must go on in the old way; he was sorry for it, but it could not be helped. His man, James West, came to an opposite conclusion. He

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deliberately counted the cost, and, after much serious thought, and consultation with judicious friends, and earnest prayer for Divine guidance, he resolved to pursue what appeared to him the path of duty, whatever sacrifice of worldly interest it might involve, believing that "the Lord was able to give him much more than this." He gave up his place at Mr. Davis's, and engaged himself for a time with a baker in a neighbouring town. There his wages were considerably lower, and he and his wife were obliged to deny themselves many indulgences they had formerly enjoyed, that they might be able to get along without breaking in upon their little hoard, which they hoped at some time or other to turn to account in permanently bettering the condition of their family.

Time passed on. The family of West increased, and the straits and privations of the parents increased also; but they felt all their sacrifices abundantly made up in the uninterrupted and happy enjoyment of their sabbaths. It was often a matter of congratulation between themselves, that even the elder children could not recollect seeing their father, on the sabbath-day, put on his working dress, and go forth to his labour. No; they were accustomed to regard all its hours as sacred, and to esteem it a delight, holy of the Lord and honourable: and the general aspect of the family and the dwelling was distinguished by that clean, orderly, respectable, and contented appearance, which almost always accompanies a conscientious and well-regulated observance of the sabbath.

I believe I have already mentioned, that the town at our end has lately been considerably enlarged, several new streets and rows having been built. Many of the inhabitants had complained of the inconvenience occasioned by the distance they had to go for a loaf, or to get a pie or pudding baked; and it was the general opinion, that a baker, commencing on a small scale, would have a very good chance, in our neighbourhood, of establishing himself and obtaining encouragement. No. 6, in our row, happened to be empty, and James West was induced to try the experiment. As considerable alterations were requisite, which would increase the value of the premises, neighbour West has his house for a longer lease, and at a somewhat lower rent than the rest of the neighbours. The utmost advantage has been made of every inch of room; I rejoice to add, with due regard to health and comfort, as well as to gain. The little back washhouse has been enlarged for a bakehouse, over which is a loft or storeroom for flour. Near the oven-flue is a small grate and copper. In the summer time, the former is employed for domestic purposes, that the front room may be kept clean and cool for the family sitting room. The latter, on one day in the week, on which they do not bake bread, is occasionally used for washing; the greatest care and good management being requisite to prevent any clashing between the two different employments.

Mrs. West is one of the most intelligent persons in common things that I ever met with. Many people, who have great learning, never think of applying it to the purposes of common life; and some, who are very active and bustling, seem incapable of admitting any principles by which their activity might be judiciously directed and regulated. My good neighbour is distinguished alike by good common sense, acute observation, and practical aptitude. Whatever be the object at which she aims, she always seems to perceive and ursue the most direct path to its accomplishment. To one of her good practices I have already alluded. It is her constant regard to health in all her arrangements. She well knows that a due regulation of the temperature of rooms is a matter of great importance, especially to persons exposed as her husband is, to the action of great heat. Hence she is particularly careful that both sitting-rooms and sleeping-rooms are well aired; during fine weather, the windows of both are kept open whenever the room is unoccupied; and, as soon as the evenings become chilly, she is mindful to secure his comfort by a cheerful fire. Some bakers suffer grievously from asthma, which I have heard a medical gentleman say, is probably occasioned or aggravated by sudden transitions from the hot bake-house to a room which is chilly and damp. Most trades have connected with them some circumstance that is more or less unfavourable to health; but this may be greatly aggravated or counteracted by the course of conduct pursued. Persons in general are too apt to overlook this, and to act contrary to the good common sense rule, "If we cannot do as well as we would, let us do as well as we can."

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Bakers in general are distinguished by a sallowness of complexion, which indicates some kind of derangement of health; my good neighbour has been very desirous of learning the cause of this, in the hope that something might be suggested to counteract it. She was told, that it was probably occasioned by the quantity of flour continually drawn into the lungs, and scattered over the skin, which chokes the pores and obstructs circulation. As much as possible to avoid this, Mrs. West is very particular in well shaking and brushing her husband's clothes, and always keeps near at hand a coat that is free from dust, which she persuades him to put on when he comes in to meals. She also takes care to set invitingly handy the bowl of clean water, soap, and towel, so that he can scarcely help washing before he eats; indeed, I have heard him say, that from habit, he could not help it now; but that his wife had some pains to bring him to it at first, until he found how much better he enjoyed his meals after such a washing. The same course is pursued with the children, who all look robust and hearty.

All the room up-stairs is occupied for sleeping, the children being as much as possible distributed with due regard to health and decency.

The little outlet beyond the part occupied in the business, is appropriated to the use of the children. They are permitted to play there, and to cultivate the borders according to their own taste. Thus they are preserved from the temptation of playing in the street, and they are encouraged in habits of industry, care, neatness, and kindness to each other.

In regard to cleanliness and order, Mrs. West and Mrs. Brown are upon a par; but there is a wide difference in their manner of training their children to their praiseworthy habits. The little Browns, I have already observed, often get a cuff for any childish neglect or transgression; but the little Wests are trained to the love and practice of order. Mrs. West rules by reason, encouragement, and example; and, as far as I can judge, her method is far more effectual than Mrs. Brown's. I often hear the latter scolding her children thus: "The moment my back is turned, you get to your mischief, and turn the house out of windows:" but when I called to see Mrs. West, on her recovery from a long illness, the house seemed almost as neat and orderly as when she was about; and her eldest girl was moving about as industriously and methodically as possible, clearing away all the litter, getting the meals in proper time, and taking care of her little brothers and sisters. I was struck with the superiority of training to *good habits*, over merely compelling to *good acts*. I observe, that Mrs. West is at once firm and gentle in her manners with her children. She speaks as if she meant what she said, and intended to be obeyed; and the children behave as if they loved and honoured her. I scarcely ever hear any screaming and squabbling among the little Wests; and, if I am not greatly mistaken, what makes them so much more quiet and peaceable than many children is, that they have been early taught to obey their parents, and love one another.

The children are kept by their mother very regular and orderly in going to school, both on the week day and on the sabbath. The parents, however, do not act as if they thought when the children were sent to school, that all the care and responsibility was cast upon their teachers; they take pleasure themselves in watching and encouraging their progress, and in enforcing a practical use of the instruction they receive. These children are remarkably civil in their behaviour. If sent with a loaf or baking, they always set it down carefully, and receive the money with a bow or courtesy, and "Thank you." It is a pity that all children are not trained to this kind of civility; it is very cheap, and tells wonderfully in their favour: besides, it is a duty enjoined on us in Scripture, to be courteous to all men, and to give honour to whom honour is due. A rude, saucy manner in children is wrong and offensive, and often stands in the way of their advancement in life. Who would like to take a rude boy or girl as an apprentice or servant?

But I must here make a remark or two on some little peculiarities—yes, I almost fear, in the present day, they must be called peculiarities—in the mode of conducting business pursued by my neighbours. I do not exactly know how it is in other towns, but in our town I have repeatedly heard persons say, "I used to deal with such a baker, but I left him, because I found his loaves short weight." "Such-an-

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one's bread is not fit to eat, it is so adulterated with chalk and alum." "I seldom send a joint of meat to bake, because it gets robbed of the dripping." Now, all these doings are very dishonest, and yet are commonly practised by those who would be very much offended at being accounted dishonest people. They pacify their own consciences and, perhaps, apologize to others, by saying, that all these things are regular in the trade, and that it would be impossible to get along without them. James West began upon the principle, that "Honesty is the best policy," and resolved to try whether the saying of ancient time did not hold good now, that "A little with the fear of God is better than great revenues without right." He resolved, by the grace of God, to deal with others as he would wish them to deal with him; really to make his goods what he professed to make them; to sell the article, both in quality and quantity, just what he was paid for; and, if he took payment in money, not to consider himself entitled, also, to take it in kind: all this seems very simple and straightforward, but is too rare in practice. I have more than once heard it said, that West was too honest to live; that he would be done up before the year's end. These gloomy predictions have not, however, been realized. I have reason to believe, that his custom is rapidly increasing, even from the distant parts of the town; for his bread has got into such reputation for its purity, that several doctors have recommended their patients to deal with him; and he has lately got the custom of two or three of the first families. I should not be at all surprised at his finding it necessary to move into large premises, and perhaps into a more central situation. Even now he is able to pay his way, and make a respectable appearance, and give his children a suitable education; and the tradesman who can do this has no reason to complain of having suffered for his honesty.

As to the observance of the sabbath, how was that difficulty broken through? When James West came to set up for himself, did he look upon it in the same light that he did when he talked about it to his old master? Yes, he did. On the very first Saturday he told his intention to each of his customers, and he has steadily adhered to it. On a Saturday evening he is generally very busy carrying home pies and meat. I cannot help thinking that he has brought some people to adopt the plan of having cold dinners on Sunday; and I never heard of any customer being offended, except one dashing family of new comers, who at the week's end took away their custom, and before the year's end went all to pieces, being many pounds in debt to every body who would trust them. It was well for neighbour West that he got off with the loss of a few shillings.

It is a remarkable circumstance, that old Mr. Davis, who had such a flourishing trade, and was supposed to be making money as fast as he could count it, in the latter part of his time was considerably reduced in circumstances. He had been so imposed upon by his journeymen, and had lost so much money by bad debts, that he was glad to leave business while a trifle remained to keep him in his old age. His nephew took to the business, and set off with a great dash; but in three or four years came to nothing.

Another thing which I observe is, that neighbour West is very prudent and careful as to giving credit to poor people; which is always an injury to them, and often a temptation to the tradesmen to take advantage of them in one way or other. If they cannot pay for a week's bread, they are less likely to pay for a month's; and as the tradesman cannot afford to be out of his money without some return, there is a great danger of his being led either to fraud or oppression. But while the Wests are firm in resisting this common source of ruin to small trades-people, they find both the inclination and the ability to perform many an act of real kindness. Many a time has a loaf from this bakehouse found its way to a starving family, or a delicate little pudding to a sick person, which, had their book been encumbered with bad debts, it would not have been in their power to bestow. They are distinguished, too, for habits of thoughtful kindness among the neighbours. Busy as Mrs. West must necessarily be with her large family, she often finds time to sit an hour with a sick neighbour, or spares her eldest girl to make a bed, or sweep a room, or go an errand. These things mark the disposition to do good. Those who in humble life are on the watch to embrace such opportunities, give the best

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pledge that if their ability were greater, their liberal kindness would be in proportion. They give the "cup of cold water" in a spirit which renders it acceptable both to God and man. From such neighbours it is a pleasure to accept a kindness; and pleasant to have an opportunity of rendering accommodation to them.

I will take my leave of this family with two remarks: First, That the foundation of true excellence of character and real enjoyment of life, in any situation, is genuine religion—"The righteous is more excellent than his neighbour;" and "The Lord blesseth the habitations of the just;" "The secret of the Lord is with them that fear him," and integrity and uprightness preserve those who wait upon him." Second, That if people wish to be happy in religion, they must really and cordially submit to its guidance, and obey its dictates, even when they seem most to run counter to worldly interests. Those who for the sake of worldly gain adhere to practices which their consciences testify against, can have no real peace of mind, and often find even their worldly purposes unaccountably crossed. "The blessing of the Lord maketh rich, and he addeth no sorrow with it." What is the sure road to happiness? To deny ourselves, and take up our cross, and follow our Lord daily. Whatever we may lose *for* obedience, we shall lose nothing *by* it; but every sacrifice shall be abundantly made up, (as Matthew Henry expresses it,) either in kind or kindness.

ON NOXIOUS INSECTS.

"And it shall come to pass in that day, that the Lord shall hiss for the fly that is in the uttermost part of the rivers of Egypt, and for the bee that is in the land of Assyria. And they shall come, and shall rest all of them in the desolate valleys, and in the holes of the rocks, and upon all thorns, and upon all bushes."—ISA. vii. 18, 19.

How self-sufficient and presumptuous is ignorance! It has been our lot more than once to hear the striking passage at the head of this paper, alluded to in terms of ridicule, with a sneer of contempt, by those who ought to have blushed for their ignorance, and trembled for their impiety. But, strange as it may seem, it is a common infatuation. None are so prone to cavil at the Scriptures as those whose information, on the very points they carp at, is most manifestly crude and imperfect: so "fools rush in, where angels fear to tread."

"The fly!" what harm, say such, can a fly do, what dire and overwhelming injury can a fly commit upon a whole nation? We would answer, That of all plagues with which it hath pleased God in justice to visit mankind, those of insects, "flies," have been the most terrific. We say nothing of devouring locusts, we speak of such only as attack man and beast. Man's boasted supremacy yields to these tormentors, and his blood is the tribute he pays.

"What," says Kirby, "would you think of any large animal that should come to attack you with a tremendous apparatus of knives and lancets issuing from its mouth? Yet such are the instruments by which the fire-eyed and blood-thirsty horse-fly, *Tabanus*, makes an incision into your flesh; and then forming a syphon of them, carries off many drops of your blood. The pain they inflict when they open a vein is usually very acute." ..... "But of all the insect tormentors, none are so loudly and universally complained of as the species of the genus *Culex*, whether known under the name of gnats or mosquitos." In our own land, we know little of these scourges, compared to other regions; yet we have found them sufficiently annoying. A few examples of what they are in other countries, may be not wholly devoid of interest, and may teach us to be grateful for mercies which, because they are in the ordinary course of events, are never thought of.

Let us travel northwards. One would think that the cold of Lapland would destroy insect life: not so. There the gad-fly, *Œstrus tarandi*, the terror of the rein-deer, obliges the herdsman to take long and toilsome migrations with his cattle from the interior to the coast, and from the coast to the interior, at stated periods. To remain in the woods during summer would be to insure the total loss of his deer, to him his wealth and dependence. The wild herds migrate instinctively. But the gad-fly is only one pest in that climate; countless myriads of mosquitos, whose "numbers are so prodigious as to be compared to a flight of snow when the flakes fall thickest; or to the dust of the earth," deluge the land. "The natives cannot take a mouthful of food, or lie down to sleep in their cabins, unless they be fumigated almost to suffocation. In the air you cannot draw your breath without having your mouth and nostrils filled

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with them; and unguents of tar, or nets steeped in fetid birch oil, are scarcely sufficient to protect the case-hardened cuticle of the Laplander from their bite."

In the Crimea, a part of Russia, Dr. Clark states, that the soldiers are obliged to sleep in sacks, as a defence against gnats, and that in spite of every precaution, several die in consequence of mortification produced by their bites. The bodies of himself and his companions, notwithstanding the protection of gloves, handkerchiefs, etc., were one entire wound, producing great swelling and fever. "The noise they make in flying cannot be conceived by those who have heard gnats only in England." It is a "most fearful sound."

If we pass from the northern to the tropical regions, we find the pest still raging. Humboldt says, "Between the little harbour of Higuerote and the mouth of the Rio Unare, the wretched inhabitants are accustomed to stretch themselves on the ground, and pass the night buried in the sand, three or four inches deep, leaving out the head, which they cover with a handkerchief." Here the mosquitos carry on the warfare by day, the temporaneros (a kind of *culex*) by twilight, and the zancudos (another species of *culex*) by night; so that there is no cessation from their attacks.

Insects, like other conquerors, have given their name to territories; as, for example, Mosquito Bay, in St. Christopher's; Mosquitos, a town in Cuba; and the Mosquito country, in North America. Armies have yielded before them; Papor, king of Persia, was "compelled to raise the siege of Nisibis, by a plague of gnats which attacked his elephants and beasts of burden, and caused the rout of his army." See Theodoret, Hist. Eccl.

"The Fly," however, to which the writer alludes in the passage, Isa. vii. 18, 19, at the head of this paper, is productive of consequences far more dire and disastrous than any we have yet alluded to. We say *is*, because it would appear, that "the fly," is still known and dreaded in the upper regions of the Nile. It is the Tsaltsalya, or *Zimb*, of Bruce, a native of Abyssinia; and most probably belongs to the family termed by entomologists, *Tabanidæ*.

"Small as this insect is, we must acknowledge the elephant, rhinoceros, lion, and tiger, vastly his inferior. The appearance, nay the very sound of it, occasions more trepidation, movements, and disorder, both in the human and brute creation, than the whole herds of the most ferocious wild beasts, in tenfold greater numbers than they ever are, would produce. As soon as this plague appears, and their buzzing is heard, all the cattle forsake their food, and run wildly about the plain till they die, worn out with fatigue, fright, and hunger. No remedy remains for the residents on such spots, but to leave the black earth, and hasten down to the sands of Atbara, and there remain while the rains last. Camels, and even elephants and rhinoceroses, though the two last coat themselves with an armour of mud, are attacked by this winged assassin, and afflicted with numerous tumours. All the inhabitants of the sea-coast of Belinda, down to Cape Gardefui, to Saba and the south of the Red Sea, are obliged in the beginning of the rainy season, to remove to the next sand, to prevent all their stock of cattle from being destroyed. This is no partial emigration; the inhabitants of the countries from the mountains of Abyssinia, northward to the confluence of the Nile and Astabolas, are once a year obliged to change their abode, and seek protection in the sands of Beja; nor is there any alternative or means of avoiding this, though a hostile band were in the way capable of spoiling them of half their substance." See Bruce's Travels.

The Zimb.

This insect (Bruce informs us) is a little larger than a bee, and of stouter proportions. A pencil of three stiff hairs projects from the head; and the limbs are serrated and covered over the inside with down. The above engraving is a copy of Bruce's figure, which shows the fly somewhat magnified. M.

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BOTANY.—No V.

The whole face of nature is now covered with luxuriant vegetation: as yet, in some places, the mower has not stripped of its glory the flowery meadow; nor have the myriads of green leaves, which present to the eye so cheering and refreshing an aspect, been scorched by the summer's most intense heat; nor do they show signs of that decay which mournfully but certainly succeeds to maturity.

Nature is in hey-day, and not only do the vegetable tribes flourish and abound, but living creatures of almost every kind are, according to their various capacity, sharing the universal enjoyment. How many living creatures derive pleasure and support from the productions of the earth! How much of the pleasure of those who delight in the study of nature arises from witnessing the happiness of other, though they be inferior creatures. What, indeed, is gratitude, which is so pleasing to God, but taking pleasure in his mercies? Now is every hour not only of the day, but even of the night, burdened with sounds expressive of the happiness of some of these creatures. About two hours after midnight, before the nightingale has concluded his song, up springs the lark, sweet bird, so susceptible and full of pleasure, that the night, short as it is, seems too long for it, although throughout the live-long day, it soars and strains its little throat with its thrilling music. The cuckoo, too, rises before the sun, and makes the valleys echo again with his often heard, but ever welcome and gladdening shout; then follow trains of crows, about to visit for the day their accustomed provision grounds. Then, as soon as the sun arises, are thousands of creatures, great and small, aroused from inactivity to life and enjoyment.

Not only the cattle upon a thousand hills, and the birds of heaven, but myriads of insects that crawl the earth, or float in the light breezes by which they are wafted about like an army in voluntary and unanimous motion, and myriads upon myriads of animalcules, many of which are hardly to be discerned with even the most efficient artificial sight—these, all according to their nature, are enjoying their little day; each one in the pursuit of some object, and answering, though unconsciously, the designs of a benevolent and wise Creator. Some we see flitting from flower to flower, ensuring vegetable fertility; and some feeding upon the noisome and putrifying moss, and thereby preventing an infectious atmosphere. But let us turn from these to "the grass of the field," which though endued neither with motion nor voice, yet has irresistible charms for those who love the country.

How rich is the botanist at this season of the year! Yes, rich; for he has a property in every flower that meets his eye; and even if he cannot transplant to nourish and cherish, yet every individual has a tribute for him, which he appropriates for the enriching and improving his heart and temper; every flower is a book, where he

> "May read, and read,
> And read again, and still find something new,
> Something to please, and something to instruct,
> E'en in the noisome weed."

It is generally the case that flowers are associated in our minds with some pleasing time or event in our past lives; but however that may be, when we have once become acquainted with a flower, that acquaintance continues through life, and is still more confirmed, by every fresh interview. Flowers are never out of temper with us, and whatever be our mood, we cannot be out of temper with them; we even forgive the scratching thorn of the rose, for the rose is still sweet and lovely: and whether the violet or the clematis speak to us of joys which a few summers since were in the germ, and being still continued to us, are now advanced and realized; or of pleasing and sanguine anticipations, which have proved more withering than themselves, still they are welcome—welcome as was the season of which they still remind us: even in the case of blighted hopes they kindle a holy, melancholy contemplation, with which, if we could, we would not part. Their endless variety of hue and of outline refreshes our vision; their inimitable beauty speaks to us of a "paradise lost," but speaks to us also of a "paradise prepared," as they are some of the ten thousand proofs of the continued love of God, even to sinful creatures.

Walking by the sandy hedge-bank, we are struck with the beauty of the little speedwell, (*Veronica chamædrys*,) which is sufficiently abundant to be well known. Fig. 2, is the magnified flower. It deserves to be taken from its wild state to ornament the flower bed or rock work;

* See p. 53 of this volume.

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its sky-blue flowers, which last for a considerable time, vie in beauty with the forget-me-not.

If we cross a shallow running stream, the brooklime (*Veronica beccabunga*) catches our eye, being remarkable for the bright green of its leaves, and blue flowers; this (if known) may be safely gathered and used as a salad; it is in high repute as a purifier of the blood.

By the river-side we may find in abundance the forget-me-not, (*Myosotis palustris,*) with its roll of flowers of incomparable azure. This plant may be taken up with a little earth, and if placed in a pot standing in water, will thrive in almost any situation.

In the deep shade of the wood we meet with the humble woodruff, or lyricon fancy; (*Asperula odorata;*) we never lose an opportunity of depositing in our waistcoat pocket a few sprigs of this plant, which will for months and years, if taken care of, give out a most grateful odour, like the sweetest hay.

Many of the grasses are also in perfection, and are well worth the most minute investigation; they will at least show the peculiar force of that expression of St. Peter, "All the glory of man is as the flower of grass."

The following are amongst the most remarkable British flowers of the present month.

Utricularia vulgaris, the greater bladderwort, in standing water.

Lemna minor, lesser duck-weed, on the surface of ditches.

Lycopus Europæus, Gypsy weed, on river banks.

Salvia pratensis, meadow clary, in meadows, and sandy banks.

Salvia verbenaca, common clary, in meadows and road-sides.

Dipsacus sylvestris, wild teasel, on hedges and way-sides, common.

Scabiosa arvensis, field scabious, in corn-fields and pastures, common.

Sherardia arvensis, little field madder.

Asperula cynanchica, smaller woodruff, on chalky pastures.

Galium, bedstraw, several species.

Rubia peregrina, madder, on limestone rocks.

Plantago major, greater plantain.

Sanguisorba officinalis, great burnet, in moist meadows.

Myosotis versicolor, yellow and blue scorpion grass, on walls, or in dry corn-fields.

Cynoglossum officinale, common hound's-tongue, by way-sides.

Symphytum officinale, comfrey, in wet situations.

Borago officinalis, common borage, on old walls in villages, a doubtful native.

Primula farinosa, bird's-eye primrose, on elevated situations, in the north of England and Scotland.

Menyanthes nymphæoides, fringed buckbean, in still parts of the Thames, and some other rivers.

Hottonia palustris, water violet, in ditches.

Lysimachia vulgaris, great loosestrife, by river sides.

Lysimachia nummularia, herb twopence, in wet pastures.

Anagallis arvensis, pimpernel, in corn-fields.

Convolvulus arvensis, smaller bird-weed.

Atropa belladonna, deadly night-shade.

Datura stramonium, thorn apple.

Solanum dulcamara, common night-shade, in hedges.

Who loves not the shady trees,
The smell of flowers, the sound of brooks,
The song of birds, and hum of bees,
Murmuring in green and fragrant nooks,
The voice of children in the spring,
Along the field-paths wandering?

Who has not stood at morning's dawn,
When all the eastern sky was gold,
When pearly dew bedropt the lawn,
And shone on waving wood and wold,
When dappled clouds were blue and white,
And felt his soul move like the light?

England has many a flowery vale,
Wild heath, and hill, and twilight grove,
Where yet the lute-tongued nightingale
Makes answer to the low-voiced dove:
O, leave your towns, and come with me,
Under the shady greenwood tree.

T. Millar.

DIVINE FORGIVENESS.

The forgiveness that there is with God, is such as becomes him—such as is suitable to his greatness, his goodness, and all the other excellences of his nature; such as that therefore by which he will be *known to be God*. What he says concerning some of the works of his providence, "Be still, and know that I am God," may be much more said concerning the great effect of his grace; "Still yourselves, and know that he is God." It is not like that narrow, difficult, halving, and manacled forgiveness, that is found amongst men; but it is full, free, bottomless, boundless, absolute; such as becomes his nature and his excellences.

Owen.

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Flower, Fruit, and Seed of the Pomegranate.

THE POMEGRANATE.

THE pomegranate was long considered as a member of the myrtaceous order or family, the leading characters of which were touched upon in our description of the myrtle.* To this charming family it has an obvious affinity in the structure of its flowers, habits, and general appearance. The peculiar formation of the seed, and the absence of pellucid dots upon the leaves, supplied hints for separating the pomegranate from an association in which for a long time it had, by common consent, held a legitimate place. All the commendations, however, we bestowed upon the myrtaceous assemblage, taken as a whole, appertain to the individual now under consideration; and we are insensibly led, though scientific considerations might say no, to unite it, in imagination at least, with that delightful company of trees and shrubs, whose peculiar beauty exceeds all praise.

* See page 81, of "Visitor," for 1837.

The rich scarlet blossoms, which are sometimes variegated with touches of white, the polished green foliage, and the lovely hue of the large swelling fruit, while it hangs upon the trees, are calculated to excite the liveliest ideas of interest and admiration. Russel, when describing the gardens of Aleppo, says, "Even he who can recall the enchanting scenes of Richmond or of Stowe, may, perhaps, experience new pleasure in viewing the glistening pomegranate thickets in full blossom."

From a tree so profusely adorned, it is no marvel that the divine poet found matter well fitted for comparison and simile. "Thy temples are like a piece of pomegranate within thy locks," Cant. iv. 3. The word translated *piece* was, in our opinion, the appropriate term for the rind of the fruit, which is smooth and tinted, especially before the flower falls, with a soft and blushing red, and may well represent that bloom which is the well-understood sign of

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youth and freshness. Dioscorides, a Greek writer on the medicinal virtues of herbs, informs us, that the rind of the pomegranate bore an appropriate name in that ancient language, whence we are led to suppose, that it was not less distinguished in the Hebrew, which is often so peculiarly happy in the aptitude and propriety of its terms. Let us, therefore, take it for granted, that *pelah*, the original word translated *piece*, is equivalent to *sidion* of the Greek, and *rind* in English, and then every word in the passage will be called upon to furnish its part towards the meaning of the whole. "Thy temples are like the rind of a pomegranate," smooth, polished, and suffused with a delicate blush of health and joy. We are at liberty to imagine, that this comparison was made in sight of the pomegranate tree, while the fruit "burnished" upon its verdant branches, and all the charms of surrounding nature contributed to heighten its beauty.

The *punica granatum*, or pomegranate is characterized by the countless number of seeds lodged within the fruit, which is about the size of a large apple, and is covered by a rind of peculiar polish, and hardness. The seeds are invested with peculiar coverings, that become soft, and form the red pulp, which is eaten. The blossoms are generally of a rich scarlet, sometimes variegated with white. When in China, the writer counted several varieties, distinguished from each by the colour of their flowers. The blossoms often become double, like those favourite plants which are the delight and care of the florist: they are then called balaustium blossoms. It has long been cultivated in the hot-houses of the curious; but, at the best, the individuals we have seen, present a very imperfect sample of the tree when flourishing in the land of its nativity, under the genial influences of a southern climate. The peculiar dye of the blossom is referred to in the meaning of its first name, *punica*; as if we should say, "It was stained with Tyrian purple." The second, *granatum*, implies that the fruit is full of small grains or seeds. This latter circumstance seems to be the reason why at a very early period, the pomegranate was treated as the emblem of fertility and blessing. The rain and dews of heaven are called, by the apostle, the blessing of God. The royal psalmist, in that very beautiful Psalm, the sixty-fifth, has blended the blessing of God with the fruitful showers of heaven, so that there is no impropriety in coupling the benign regard of Heaven with the richness and fecundity of the earth. We find traces of this sentiment among the heathen; the once fair and flourishing island of Rhodes bore the blossom of the pomegranate in her arms, and Achilles Tertius tells us, that an image of Jupiter, who was no more than an impersonation of the vital air, held a pomegranate in his hand. As the emblem of blessing, it had a consecrated place upon the holy vestments of the high priest, and on the chapiters which crowned the two pillars in Solomon's temple. The scriptural reader may safely regard it as the symbol of that blessing which maketh rich, and addeth no sorrow therewith.

We have considered the pomegranate tree, first, in reference to its botanical character, as allied to, but distinguished from, a large and beautiful order of plants; then, as the object of particular mention in the Song of Solomon, wherein we suggested a meaning for a term that has hitherto been slighted, by which the sentiment is rendered conformable to poetic usage, which ever looks at things under their most beautiful aspects; and, lastly, we have supplied an interpretation of the symbol, which is easy to sense, and consistent with the tenour of ancient philosophy.

Forbes, in his Oriental Memoirs, observes:—

"The Indian pomegranates, although sometimes tolerable, are by no means equal to those brought from Arabia by the Muscat Dingeys. These are a very fine fruit; large, and full of juice, highly flavoured. Some are red, others white. The most luxurious method of eating them is, to have the juice expressed from the seeds and interior film, by which means the harsh seeds and bitter flavour are avoided. It is a delicate beverage; and one of those pomegranates will sometimes fill a small bason. They make a pleasant wine from this fruit in Persia and Arabia, to which there is probably some allusion in the Song of Solomon, where they are mentioned as growing in orchards. 'I would cause thee to drink of spiced wine of the juice of my pomegranate,'" chap. viii. 2.

G. T. L.

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REMARKABLE BEGINNINGS.

It has frequently been remarked, that the oak, beneath whose widely-extended branches the cattle delight to repose, was once an acorn, which a sparrow might carry in its beak; and that the mighty river on which a navy could float, may be traced up to an obscure and inconsiderable spring. In the study of human history, we find many analogies to such circumstances: the highest attainments of intellect, the habits and employments of life, the possession of real piety, and even distinguished usefulness, often having an apparently trivial origin. A few illustrations of this fact, gathered from a multitude, may be offered to the reader.

It is related, for instance, by the Chevalier Ramsay, that as one of the Dukes of Argyle was walking in his garden, he found a Latin copy of Newton's Principia, lying on the grass; and that on proceeding, under the supposition that it was his own, to direct that it should be carried to his library, it was claimed by a youth in his eighteenth year, the son of his gardener. In an interesting conversation that followed with the youth, the duke, astonished at the candour, force, and accuracy of his answers, inquired how his information had been gained. The youth replied, that a servant taught him to read about ten years before; that observing the architect of his grace's mansion using a rule and compasses, and making calculations, he asked their use, and thus learned that there was a science called arithmetic; that he, in consequence acquired a knowledge of this and of geometry; and that afterwards, finding there were good books on these sciences, in Latin and French, he learned these languages; and to this statement he added, "It seems to me, my lord, we may learn every thing, when we know the twenty-four letters of the alphabet."

Here, indeed, is the key to vast and unmeasurable resources. These letters, small as the number is, are proved arithmetically to be capable of more than six hundred thousand millions of billions of different horizontal arrangements. To the whole extent of the territory of literature an acquaintance with these letters is an entrance! Here Addison and Johnson, here Bacon and Newton, took the first step.

The principal occupation of life is not unfrequently to be traced to inconsiderable circumstances. It is said, that Michael Angelo was reared at a stonemason's, and the chisel which his nurse placed in his hands as a plaything, seemed to give a bent to that genius which produced the sculptures of that admirable artist. West sketched a babe in its cradle during the absence of its mother, who, at her return, on finding what he had done, pressed him eagerly to her bosom; and in reference to this he said, "That kiss made me a painter." Haydn associated the idea of some beautiful cherries he received as a reward for his early efforts, with the musical shakes he produced in after-life, to the distinction of which they supplied no ordinary stimulus. The poetic inspiration of our Christian poet, Montgomery, was nurtured by the early perusal of Cowper's Poems, the only work of taste and imagination he was allowed to read. Sir I. E. Smith, a worthy heir of the great naturalist, Linnæus, commenced the study of botany with the furze, the only plant then in flower. And Hauy owed his high distinction in the science of mineralogy to his accidentally dropping a beautiful specimen of calcareous spar, crystallised in prisms, one of which was so broken as to present a new crystal.

From these circumstances, however, we may rise to others accordant with them of a higher order, suggesting the memorable words of one of our British bards:—

> "Who shall say how vast the plan,
> Which this day's incident began?
> Too slight, perhaps, the small occasion,
> For our dim-sighted observation;
> It pass'd unheeded, like the bird
> Which clears the silent air unheard;
> And yet may prove, when understood,
> The harbinger of endless good."

To take an instance; an educated, eloquent, and popular young man, remarkable in fashionable society for his wit and his songs, a patron of the great race course in the north of England, had to pay a visit to a sick relative at Nice, and was accompanied by Isaac Milner, afterwards Dean of Carlisle. In one of their conversations, allusion was made to a devoted evangelical clergyman, of whom the former said, "I think he carries things a great deal too far;" but the latter replied, "I think you would form a different estimate of the subject, were you carefully to peruse with me the whole of the New Testament." It was accordingly arranged that they should do

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this together; through the power of the Holy Spirit, the perusal of this one part of revelation led to the remarkable change which has shed a halo of glory around the name of Wilberforce. For to this it was owing that the gay and fascinating patron of "the turf," became a Christian senator, the philanthropist who obtained the abolition of the slave trade, and the author of the "Practical Views of Religion," to the instrumentality of which Legh Richmond, among others, traced his conversion to God!

With what force, then, should the words of the Saviour occur: "The kingdom of heaven is like to a grain of mustard-seed, which a man took, and sowed in his field: which indeed is the least of all seeds; but when it is grown, it is the greatest among herbs, and becometh a tree, so that the birds of the air come and lodge in the branches thereof!" Here we see the minuteness of Divine care; for if "the unambiguous footsteps of a God" were not discernible in little things, they would not be in "the vast." Here, too, it is manifest that these should excite gratitude, and stimulate hope; that the motto in reference to all that is good should be, "Go forward;" and that the distance between man who uses the mightiest instruments he can command, and yet often fails, and God, who chooses the weak things of the world to confound the strong, and things which are not to bring to nought things which are, is indeed infinite.

BRIEF NOTES OF OLD HUMPHREY.

Our frail bodies are tottering habitations; every beat of the heart is a rap at the door, to tell us of our danger.

Do you want to know the man against whom you have most reason to guard yourself? your looking-glass will give you a very fair likeness of his face.

Whether we go backwards, or forwards, to the right hand, or to the left, every step we take is a step towards the grave.

When I put my finger on my pulse, it tells me at the same moment, that I am a living and a dying man.

True wisdom is to know what is best worth knowing, and to do what is best worth doing.

When the infidel would persuade you to abandon your Bible, tell him you will do so when he brings you a better book.

A man should always look upwards for comfort; for when the heaven above our heads is dark, the earth under our feet is sure to be darker.

When we start back with unusual surprise at the wickedness of others, may it not be a proof that we are not sufficiently acquainted with our own hearts?

If death be a solemn subject with the hope of eternal joy, how terrible must it be with the fear of eternal woe!

The friend that lightly flatters thee is an enemy; the enemy that justly reproves thee is a friend.

If the idle man were compelled to count the tickings of a watch for one hour, he would be glad to pull off his coat the next, and work like a negro.

As the lark sings at the dawn of day, and the nightingale at even, so should we show forth the loving-kindness of the Lord in the morning, and his faithfulness every night.

He who neglects religion prepares for himself a bitter draught, and a meal of wormwood; a nightcap of thorns, and a bed of briers; a life of vexation, and a death of sorrow.

Pride is an unchristian quality, yet how many who call themselves Christians are proud! Humility is a Christian grace, yet how few who call themselves Christians are truly humble!

If you meet with one very vain or very ambitious, do not envy him, but think thus to yourself, "My fine fellow! the grave will soon be your bedchamber; the earth your pillow; corruption your father; and the worm your mother and your sister."

If you want to get a spiritual appetite, walk often in the green pastures, and by the still waters of God's promises to his people.

If the world knew what passes in my heart, what would it think of me? I do know it, what then do I think of myself?

The most unreasonable, the most ungrateful, and the most deceitful of all things, is the human heart.

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THE PERAMBULATOR.

EXCURSION TO FRANCE.

PART I.

Departure from Herefordshire — The astonished Countryman — Ruins of Stonehenge — Southampton—Netley Abbey—Unexpected departure of the Steam Packet — Gosport — Portsmouth—Brighton—Loss of a Companion—Vallance's Cylinder — Steam Packet leaves Brighton — New sensations—Wind rises—Sea-sickness—A Storm —Dangerous situation of horses and groom—Arrival at Dieppe.

GIVE freedom and fresh air to a grateful, spirited perambulator, and his wants are well nigh supplied. He can cheerfully dispense with dainty meats and the sparkling glass, who finds a well-spread feast on every blackberry bush, and a delicious draught in every running stream. To attempt to describe the delights of wandering to those who know them not, would be vain; to those who do know them it would be unnecessary. For myself, so great is my enjoyment in the open air, that, take away the tinkering and fortune-telling, the hedge-pulling and hen-roost-robbing of a vagabond life; in short, remove immorality and disgrace from the calling, and give it some profitable object, and I could be well content, for a season, to wander like a gipsy!

It is now eleven years, since I set off on foot, with a friend, for Southampton, intending to cross the British channel, and then to walk to Paris. To those who are interested in a true narrative, told in simple language, the following recital may not be unwelcome; it will come home to the hearts of such readers as yearn for an opportunity to see a foreign country, yet are repressed by a formidable and fanciful array of dangers and difficulties. A confused notion of great preparation, of luggage, post-chaises, diligences, great expense, and a want of knowledge of the French language, has damped the ardour of many an enterprising spirit. It will afford such, perhaps, some consolation, and some hope of future enjoyment, to know, that a perambulator, possessing a very little knowledge of French, may make a few arrangements, wrap up a shirt and a pair of stockings, with a few other necessaries, get his passport, and set off for Paris, with a fair prospect of an economical, a pleasant, and profitable tour. My narrative will be given from notes taken by me at the time; and the observations it will contain must be regarded, not as the mature reflections of leisure hours, but, as the fresh feelings of an Englishman, for the first time in his life setting his foot on a foreign shore.

On the 5th of June, 1827, after despatching a trunk containing a suit of clothes, and a few necessaries, by wagon to Southampton, my friend and I set off on foot early in the morning, full of life and spirits, from a Herefordshire village, taking the road to Newent.

We were dressed alike, in light jackets and trowsers of pepper and salt fustian, but my friend wore a cap, while a chip hat adorned my brows. Thus accoutred, with a small parcel which we alternately carried, stick in hand, we walked on, anticipating a tour of no common interest. Herefordshire, the land of hops and apples, of bees and blossoms, and balmy breezes, was soon left behind. For months we had resided in the same neighbourhood, partaking the hospitality of The Nash, The Vicarage, Basham, Fawley Court, and Hill Eaton; wandering together in the woods and coppices, and sailing on the rapid current of the winding Wye. We had visited Holm House, and Goodrich Court, Windcliff and Tintern Abbey, but now a more eventful enterprise had been undertaken, our eyes and our hearts were turned towards France.

It is sometimes pleasant, and always profitable, to look back upon the past, whenever we can discover the spirit and temper of mind with which we entered on any important enterprise. At the head of the Note Book, in which I purposed to record our adventures, I find the following entry:—"In this, and in all undertakings, I would commit my ways unto thee, O God, my Creator, and Redeemer! Direct thou my paths, and be with me and with my companion."

It may be, that he who accompanied me in my pleasurable excursion, may never glance over this brief narrative: however that may be, I am bound gratefully to acknowledge, that the ardour of his Irish heart, the warmth of his affections, and the depth and decided tone of his piety, doubled the gratification I should otherwise have enjoyed.

In half an hour after we started, a sharp shower saturated our thin jackets; but with light hearts we passed on through Newent, Gloucester, and Barlop Hill, to Cirencester; here, after our walk of thirty-seven miles, we rested for the night.

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The following morning we set off for Malmsbury, an olden town, with an ivy-grown abbey; and continuing our course through Chippenham and Devizes, walked thirty-five miles, taking up our abode for the night at Lindway.

A variety of little incidents and lively sallies gave buoyancy to our spirits, as we walked along. At one place we were taken for pedlers, at another for excisemen, and after that for officers in the army. Our dress was well adapted to give a colour to all these suppositions. Meeting a countryman in a lonely place, I asked him in French, to direct us the road, and not receiving an answer, repeated the inquiry more urgently; had it suddenly thundered, the poor fellow could not have expressed more astonishment. He recoiled from us, as a man would from a bear whom he expected to spring upon him, and turned round a dozen times to look at us as he went on.

Being true lovers of nature, we heartily enjoyed the varied scenes which attracted our attention; the rising and setting sun, and the varied landscape of hill and valley, wood and water, all contributed to our delight. We were caught in a storm, but it was too awfully grand at the time, and the scene too delightful afterwards, for us to regret it.

Oh, twas a gladd'ning, glorious thing,
To see the sun in pity fling
On the poor weeping trees his ray,
To wipe their falling tears away.
And the rejoicing leaves the while,
Lit by the sun-beam seemed to smile
A thousand times, in our rapt eye,
More lovely than when they were dry.

The next day we visited that awe-inspiring spectacle, the ruins of Stonehenge; loitering among the mysterious masses, whose history has become obsolete, nay absolutely lost in the annals of ages gone by; sitting on one of the stupendous gray stones, I wrote in my note book as follows:—

Who rais'd the wondrous pile? I ask'd and sigh'd,
And paus'd for a reply, but none replied:
Time passed me by, and answer'd with a frown,
"Whoever rais'd it, I will pull it down."

From Stonehenge we passed on, over the plain, to Salisbury, and afterwards to Southampton, in all a distance of forty-seven miles. The foot of my companion failed him, it was sadly blistered, and this rendered our pilgrimage to him a painful one, but his lively sallies were uninterrupted. We made an odd entry into Southampton, he holding by the skirts of my coat, and I towing him along as a steamer tows a merchant ship. The following day, as a packet boat was about to start for Havre, we applied to the Consul for our passports. Fortunately, as we thought, but unfortunately in reality, some of the men belonging to the steamer slept at our inn: they readily undertook to give us due notice of the sailing of the packet. Finding that we had time on our hands, we set off for that romantic ruin Netley Abbey, and then returned to our inn.

Thinking it long before we were summoned to embark, we walked down to the water's edge, and discovered, to our consternation, that the packet had just sailed. To arrest the progress of the steamer was not practicable; to overtake it by boat equally hopeless. What was to be done? Finding another passenger left behind like ourselves, we took a post-chaise, thinking it possible to outrun the steamer. I voted for four horses, our new friend thought two sufficient; the consequence was that we reached Gosport, jumped into a boat, and got half a mile from land, just in time to see the packet pass by, mocking our efforts with the white foam of its paddle-wheels and the black smoke of its chimney.

Having no other resource, we slept at Portsmouth, and then started for Brighton, whence the next steam-packet was expected to sail. Our new friend had enough to occupy his thoughts, for not only had he lost his passage in the steamer in which a friend of his had sailed, whom he had agreed to accompany, but he had lost also a fifty pound note, and this appeared to inconvenience him much. How suddenly was his sunshiny excursion overcast with clouds! how unexpectedly the cup of pleasure was dashed by disappointment from his lips!

Leaving our new friend at Portsmouth, we hastened on to Brighton; and here a bitter draught was in store for me. I can hardly describe my regret, on learning that it was necessary for my friend and companion to leave me. The ill health, and critical state of a near relative, summoned him from my side; he left me for London, and I, companionless, prepared to cross the Channel.

On what spiders' threads hang our dearest earthly enjoyments! We build our hopes high as though they were based on a rock, when, too often, their

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foundation is in the crumbling dust, and they are crushed before the moth! How seasonable is the admonition, "Boast not thyself of to-morrow; for thou knowest not what a day may bring forth."

The next day I roamed over Brighton, gazed on the mosque-like turrets of the Pavilion, and walked on the sea-sands. Far out from the shore floated a bonnet, and fears were entertained that some hapless human being might be beneath it. The tide was rapidly retiring, when a sailor leaped into the sea, and a throng gathered on the beach, expressing their doubts whether he could make head against the tide; he regained the shore with difficulty, bringing the bonnet with him.

At that time Vallance's celebrated plan of travelling through a cylinder occupied much of public attention. It is an axiom, that common air rushes into a vacuum at a speed equal to that of a thousand miles an hour, and Mr. Vallance considered that between that velocity and the highest rate of speed hitherto attained in travelling, there was abundant room for improvement. He erected a wooden cylinder, or tunnel, which was, I think, six feet in diameter. In this was placed a kind of apartment open at one end, with table and comfortable seats, with a round screen between it and the cylinder. The apartment moved on rollers, placed at the top, bottom, and sides, so that as fast as the air in the cylinder could be exhausted by air-pumps, the outward air pushed the apartment forward, by forcing against the screen. I passed two hours with Mr. Vallance, travelling along the cylinder with him, and listening attentively to his explanations. I left him with the impression, that if his head were as cool, as his disposition was ardent and persevering, his invention would be much more likely to succeed.

About ten o'clock I went on board the steamer; the chain-pier was thronged with well-dressed people. At the present time I can smile at my then excited emotions: had I been embarking for India or Australia, scarcely could I have been more sensitive. It now appears to me ludicrous, that I should have been so affected in leaving England for a few weeks, but my feelings then were perfectly natural; others, under the same circumstances, no doubt feel much in the same manner.

The day was more than beautiful, the wind was fair and fresh, and as the pier, and the people, and the shore receded, I felt a new and in some degree an unutterable sensation. I felt as though I was a part of the vessel; I partook of her labours; I was interested in her welfare, every plank in her appeared like a friend, and every sailor on board her was a brother. The love of country and friends burst upon me; pleasure and surprise were mingled with awe, and my heart melted with thankfulness to the Father of mercies, for the consciousness of protection, which wrapped me round as a mantle.

The sea seldom fails to excite in the breast of a stranger a sensation of awe and admiration. At first, as I gazed on its waters, apparently so immeasurable and ungovernable, it appeared an act of temerity to venture from the shore; but insensibly, the pier braving the billows, the houses advancing to the edge of the briny deep, and the advancing vessel managed with such fearlessness and ease by the sailors, imparted confidence, as though man possessed supremacy over the ocean; or rather, that God had delegated to man the power to put a hook in the nostril and a bridle in the jaws of this huge and turbulent leviathan: Man seemed to have power over the ocean; and, being a man, I felt as though I had some share in the achievement.

For a time the steamer pressed onwards through the water, like the floating fragment of a world launched on the waves; but afterwards it pitched about, and became more impeded in its course: still, as the wind freshened, and the billows rose, the engine laboured like a giant, and the paddle-wheels worked wonders, in my estimation.

We had about fourteen passengers on board, besides the seamen. Most of them spoke French, and I took every opportunity of adding to my slender knowledge of the language. By the time we were abreast of Beachy Head, the wind blew hard, and the sea ran high. We had horses and sheep on board, and the tossing of the vessel sadly annoyed them.

Before we lost sight of land I grew qualmish; and, in an hour after, almost all the passengers were seasick. The wind still rose, and fears were expressed by some for their safety. Preparations were made by the sailors for a hard blow; but how shall I

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describe the paralyzing influence of the sickness which came upon me? I felt no fear, and had a longing desire to take a part in what was passing on board, yet was I spell-bound. My mind was free; I could observe, reflect, reason and soliloquize. I even sang as I clung to a rope leaning over the vessel's side, yet could I not have turned my head to save the packet from foundering, and my fellow-passengers from the deep-yawning waters. The plunging of the steamer, as though it would bore its way to the bottom of the deep, and its sudden liftings as if it were mounting into the air, made my soul sick of its fleshy tenement.

A storm came on, at least what I considered such. The winds howled; the rain descended; the huge billows raged; the sea broke over us, and several passengers were flung down on the deck. The sailors lashed every thing fast that was moveable, and the captain wore an air of anxiety in his face. A gentleman was dashed with his throat against the bulwarks, and most of the people were driven below. All this time a young lady remained on the deck, looking tranquilly on the raging waters; her attitude and calm countenance were admirable,—

I mark'd her mid the whitening surge,
What time the storm was roaring;
Her bright eye wandering o'er the wave,
The watery world exploring.

Though rudely blew the winds of heaven,
No spells of danger bound her;
But calm she stood on the creaking deck,
While the billows were breaking round her.

At last she took refuge in the cabin.

How would an old tar, who had been tossed about in the Bay of Biscay, or wrecked by a West Indian tornado, twist in his cheek his quid of tobacco, and laugh at a landsman's account of a capfull of wind in the Channel! No matter, I am describing the way in which things affected me, whatever amusement the narrative may afford at my expense.

On board the vessel were two valuable blood horses, under the care of a groom; they were placed in high pens on the deck. It was almost impossible for them to keep their feet in the pitching of the packet; they were sadly terrified and distressed, and one of them was so chafed and maddened by the continued lurching of the vessel, that he leaped on the top of his pen, broke it down, and fell on his side, knocking his head against the deck, and striking out his heels in all directions. The groom seized him by the halter, and a struggle took place, in which both horse and man hung half-way over the bulwarks; every moment I expected to see them plunge forward, when they must have been swallowed up by the raging flood. Sailors are proverbially bad horsemen. Even amid the raving of the elements, and the confusion and danger of the scene, it was a ludicrous spectacle to observe half a dozen of them in a string, one of them holding the horse's tail, while the rest clipt each other round the waist, pulling away manfully, crying, "Yo! yo!" just as if they were tugging at a rope to hoist a hogshead out of the hold. By great exertion the horse was forced again upon deck; and the groom, a resolute and daring fellow, held down his head for hours during the storm.

When a little recovered from my sickness, it was with a strange interest, almost amounting to delight, that, hanging over the bulwarks, I gazed on the turbulent waves. It was a scene I had yearned to behold, and though the sky was overcast, and the winds raging, though at every plunge the keel seemed to fathom the vasty deep, yet I wished to be girt around with wilder terrors. I wanted thunder and lightning, and scarcely would a shipwreck itself have been without its attractions!

Vast and illimitable ocean! How does the amplitude of thy power, and the infinitude of thy terrors set forth the greatness of His might, and the terribleness of His Majesty, whose whisper can hush thee to sleep, and whose voice thou art swift to obey! "Hitherto shalt thou come, but no farther, and here shall thy proud waves be stayed."

Natural scenes, if not always lovely, are ever interesting, whether clothed with beauty or sublimity. Nature, I love thee! and,

Whether I view thee in the lonely glen,
Where vales recline, or where proud mountains rise;
What time the moon is gliding soft; or when
The glorious sun careering through the skies,
Throws round creation his resplendent dies;
Or where wide ocean's endless wonders be;
Still art thou beautiful to my rapt eyes!
Thy mighty Maker in thy face I see,
And sing his praises while I gaze on thee.

The night came upon us, and we appeared to make no way; but at last the light-house at Dieppe was seen. There

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it stood amidst the breakers, like an angel with a bright countenance, warning us away from destruction. Though weary and drenched to the skin, the novelty of our situation, and the interest it excited, made me ample amends for its inconvenience.

At about one o'clock in the morning we arrived at Dieppe.

THE DARKNESS AT OUR SAVIOUR'S CRUCIFIXION SUPERNATURAL.

From the account given of the nature of eclipses, it plainly appears that the sun can never be eclipsed in a natural way, but at the time of new moon; nor the moon, but when she is full; and that when the sun is totally eclipsed, the darkness can never continue above five minutes at any place of the earth. But the three Evangelists, St. Matthew, St. Mark, and St. Luke, mention a darkness that continued three hours at the time of our Saviour's crucifixion. If their account of that darkness had been false, it would have been contradicted by many who were then present, especially as they were great enemies both to Christ and his few disciples, as well as to the doctrine he taught. But as none of the Jews have contradicted the Evangelist's account of this most extraordinary phenomenon, it is plain that their account of it is true. Besides, the Evangelists must have known full well that it could not be their interest to palm a palpable falsehood upon mankind, which, when detected, must have gone a great way towards destroying the credibility of all the rest of the account they gave of the life, actions, and doctrine of their Master; and instead of forwarding the belief of Christianity, it would have been a blow at the very root thereof. We do not find that they have bestowed any panegyric on the life and actions of Christ, or thrown out an invective against his cruel persecutors, but in the most plain, simple, and artless manner, have told us what their senses convinced them were matters of fact; so that we have as good reason to believe that there was such darkness, as we have to believe that Christ was then upon earth; and that he was, has never been contradicted even by the Jews themselves.

But there are other accounts of Christ besides those which the Evangelists have left us. It is expressly affirmed by the Roman historians, Tacitus and Suetonius, that there was a general expectation spread all over the eastern nations, that out of Judea should arise a person who should be governor of the world. That there lived in Judea, at the time to which the Gospels relate, such a person as Jesus of Nazareth, is acknowledged by all authors, both Jewish and Pagan, who have written since that time. The star that appeared at his birth, and the journey of the Chaldean wise men, is mentioned by Chalcidius the Platonist. Herod's causing the children in Bethlehem to be slain, and a reflection upon him, on that occasion, by the Emperor Augustus, is related by Macrobius. Many of the miracles that Jesus wrought, particularly his healing the lame, and curing the blind, and casting out devils, are owned by those inveterate and implacable enemies of Christianity, Celsus and Julian, and the authors of the Jewish Talmud. That the power of the heathen gods ceased, after the coming of Christ, is acknowledged by Porphyry, who attributed it to their being angry at the setting up of the Christian religion, which he calls impious and profane. The crucifixion of Christ, under Pontius Pilate, is related by Tacitus, and the earthquake and miraculous darkness attending it, were recorded in the public Roman registers, commonly appealed to by the first Christian writers, as what could not be denied by the adversaries themselves; and are, in a particular manner, attested by Phlegon, the freed man of Adrian.

Some people have said that the abovementioned darkness might have been occasioned by a natural eclipse of the sun, and, consequently, that there was nothing miraculous in it. If this had been the case, it is plain that our Saviour must have been crucified at the time of new moon. But, then, in a natural way, the darkness could not possibly have continued for more than five minutes; whereas, to have made it continue for three hours, the moon's motion in her orbit must have been stopped for three hours, and the earth's motion on its axis must have been stopped as long too. And then, if the power of gravitation had not been suspended during all that time, the moon would have fallen a great way towards the earth. So that nothing less than a triple miracle must have been wrought to have caused such a long continued darkness by the interposition of the moon between the sun and any part of the earth, which shows that

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they who make such a supposition are entirely ignorant of the nature of eclipses. But there could be no natural or regular eclipse of the sun on the day of Christ's crucifixion, as the moon was full on that day, and consequently in the side of the heavens opposite to the sun. And, therefore, the darkness at the time of his crucifixion was quite supernatural.

The Israelites reckoned their months by the course of the moon, and their years (after they left Egypt) by the revolution of the sun, computed from the equal day and night in spring to the like time again. For we find they were told by the Almighty, (Exod. xii. 2,) that the month Abib, or Nisan, should be to them the first month of the year. This was the month in which they were delivered from their Egyptian bondage, and includes part of March, and part of April, in our way of reckoning.

In several places of the Old Testament, we find that the Israelites were strictly commanded to kill the paschal lamb in the evening (or, as it is in the Hebrew, between the evenings) of the fourteenth day of the first month; and Josephus expressly says, "The passover was kept on the fourteenth day of the month Nisan, according to the moon, when the sun was in Aries." And the sun always enters the sign Aries when the day and night are equal in the spring season. They began each month on the first day of the moon's being visible, which could not be in less than twenty-four hours after the time of her change; and the moon is full on the fifteenth day, reckoned from the time of change. Hence, the fourteenth day of the month, according to the Israelites' way of reckoning, was the day of full moon; which makes it plain that the passover was always kept on a full moon day, and at the time of the full moon next after the equal day and night in the spring, or when the sun was in Aries.

All the four Evangelists assure us that our Saviour was crucified at the time of the passover; and hence it is plain that the crucifixion was at the time of full moon, when it was impossible that the moon could hide the sun from any part of the earth. St. John tells us, that Christ was crucified on the day that the passover was to be eaten; and we likewise find that some remonstrated against his being crucified "on the feast day, lest it should cause an uproar among the people."—*Ferguson.*

THE OLD RAPIER.

But who can call the dead to life,
Where mortal feud hath been?
And who shall tell the troubled strife
That rusty sword hath seen?

He who keeps his eyes and his ears open, as he passes through the world, is sure to see and to hear strange things in the course of his pilgrimage; and if, in addition to this habitual watchfulness, he have the habit of quietly observing and reflecting on the common, every-day circumstances of life, he is sure to turn to account much that another altogether disregards.

If it should be suspected that in the foregoing remark I have had a reference to my own character, I must at once plead guilty to the charge. I am accustomed, habitually, if not naturally, to cast a glance about me, and to extract what interest I can from the surrounding scene.

The other day, having called on a friend, I was left alone for a season, he being unavoidably absent; thus left to my own speculations, I amused myself in examining, with some attention, an old rapier, which hung up in a corner of the apartment, suspended from a brass nail. Being on terms of intimacy with my friend, and knowing that the rapier must have recently come into his possession, I took it down from its hanging-place, and drew it from its scabbard.

It was evidently an old weapon, and Time, with his rusty fingers, had handled it roughly; still, however, it retained undeniable proofs of its former splendour, and I doubted not that it was originally intended to adorn the thigh of a gentleman.

The triangular tapering blade was partially bright, and of excellent workmanship. About a foot from the point was a reddish streak, which told a tale of strife. No doubt the sanguinary stain had been carefully preserved; it was incrusted on the polished steel. The hilt was almost black, but here and there it glittered, and a closer inspection told me that it had once been thickly gilt.

The lower part of the blade was highly ornamented with gilt figures of Faith, Hope, and Charity. As my friend came not, I stood with the old rapier in one hand, and the scabbard in the other, speculating with some interest on the past.

First, I thought of the old rapier's original possessor; who could he be? Perhaps he was one of "gentle blood," with

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rank impressed upon his brow; or, an old English gentleman; or, a duellist, "sudden and quick in quarrel."

Then the different characters through whose hands the rapier must have passed. Who were they? A motley group presented themselves to my fancy. The mustachoed soldier, admiring the temper of the blade; the showy coxcomb, prizing highly the ornamented hilt; the antiquary, enamoured with the ancient rust and incrusted stain; and my friend who had, most likely, purchased it at some broker's door as a defence against the midnight plunderer.

At last I came to the gilded figures of Faith, Hope, and Charity. What mysterious affinity could possibly exist between them and so deadly a weapon? What had Faith, Hope, and Charity, to do with a rapier? I looked on the figure of Faith standing erect, and holding up a cross.

Was the blade to be drawn in defence of the Christian faith? The weapons of the Christian warfare, though "mighty through God to the pulling down of strongholds," are neither swords nor spears, nor weapons of war. The sword of the Spirit is a lawful Christian weapon; but as to sharp-pointed and sharp-edged swords of tempered steel, they are unlawful weapons in the cause of Christianity. "They that take the sword," in this sense, "shall perish with the sword." I was puzzled.

I looked on the figure of Hope, leaning on an anchor. The wielder of the rapier might have some hope of escaping the point of his enemy, and of obtaining a victory, but surely the hope set before him was not the hope of the gospel, which is "as an anchor of the soul, both sure and stedfast, and which entereth into that within the veil." I was puzzled still more.

I looked on the figure of Charity, with her babes around her. Could it be that Christian charity required the use of the rapier? Assuredly not; for charity "suffereth long, and is kind;" "charity is not easily provoked;" but, on the contrary, "beareth all things, believeth all things, hopeth all things, and endureth all things." The rapier might make widows and orphans, but was hardly likely to dry the tears of the one, or to make the other sing for joy. I was more puzzled than ever.

By the time I had sheathed the old rapier, and hung it up in its customary position, my friend joined me; but he could throw no light on the subject which had so much puzzled me: the use of the sword we knew; and the practice of adorning sword-blades we knew, but the connexion between so formidable a weapon, and the figures of Faith, Hope, and Charity, was an impenetrable mystery.

Though the glory and splendour of arms may increase,
And the blast of the trumpet be heard from afar;
Be it ours to contend for the gospel of peace,
For true wisdom is better than weapons of war.

ANT-HILLS AND THE AARDVARK.*

These ant-hills, says Steedman, were constructed of an elliptical figure, to the height of three or four feet above the surface of the ground; and such was their extraordinary number, that they extended over the plain as far as the eye could reach. So near, too, were they together, that in some places our wagon could with difficulty pass between them. "Wherever ant-hills abound, the aardvark (or earth-hog) is sure to be found at no great distance. This animal constructs a deep burrow in the immediate vicinity of its food, and changes its residence only after it has exhausted its resources. The facility with which it burrows beneath the surface of the earth is scarcely conceivable. Its feet and claws are admirably adapted to this purpose; to dig it out is almost impracticable, as in a few minutes it can bury itself far beyond the reach of its pursuers; even when found, its strength is so great as to require the united efforts of two or three men to drag it from its hole. When fairly caught, however, it is by no means retentive of life, but is easily despatched by a slight blow over the snout. The aardvark is an extremely timid, harmless animal, seldom removes to any great distance from its burrow, being slow of foot, a bad runner, and is never by any chance found abroad during the daytime. On the approach of night, it sallies forth in search of food, and repairing to the nearest inhabited ant-hill, scratches a hole at the side of it just sufficient to admit its taper snout. Here, having previously ascertained that there is no danger of interruption, it lies down, and inserting its long slender tongue into the breach, entraps the ants, which, like those of our own country, upon the first alarm, fly to

* See page 153, of "Weekly Visitor," for 1835, for a description and an engraving of this animal and the ant-hills.

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defend their dwellings, and mounting upon the tongue of the aardvark, adhere to a glutinous saliva with which it is covered, and are thus swallowed in vast numbers. If uninterrupted, the aardvark continues this process until it has satisfied its appetite; but on the slightest alarm it makes a precipitate retreat, and seeks security at the bottom of its subterranean dwelling. Hence it is that these animals are seldom seen, even in those parts of the country where they most abound. Like other nocturnal animals, passing the greater part of their lives in sleeping and eating, they become exceedingly fat: their flesh is considered wholesome and palatable food."

IGNORANCE AND ERROR.

It is almost as difficult to make a man unlearn his errors as his knowledge. Mal-information is more hopeless than non-information, for error is always more busy than ignorance. Ignorance is a blank sheet, on which we may write; but error is a scribbled one, from which we must first erase. Ignorance is contented to stand still with her back to the truth; but error is more presumptuous, and proceeds in the backward direction. Ignorance has no light, but error follows a false one: the consequence is, that error, when she retraces her footsteps, has farther to go before she can arrive at the truth, than ignorance.—*Lacon.*

THE PAIN OF THINKING.

Whence comes it to pass that men are transported to such a degree with gaming, hunting, or other diversions, which seem to have taken an absolute possession of their souls? It is not because there is any real or intrinsic good to be obtained by these pursuits; it is not because they imagine that true happiness is to be found in the money which they win at play, or in the capture of the beast which they run down in the chase; for should you present them beforehand with both these to save their trouble, they would be unanimous in rejecting the proposal. It is not the gentle and easy part which they are fond of, such as may afford them leisure and space for thought; but it is the heat, and the bustle, and the hurry which divert them from the mortification of thinking. On this account it is that men are so much in love with the noise and tumult of the world; that a prison is a sort of horror, and that few persons can bear the punishment of being confined to themselves.—*Pascal.*

FAITH AND LOVE DISTINGUISHED AND COMPARED.

Faith and Love have respectively the preference of each other. In respect of spiritual life, faith is the most necessary, and love has a necessary dependence upon it; otherwise, to love is more than to believe, because it necessarily implies or includes belief; just as, to taste meat, is of more use than to love it. If we look to influence, love is more excellent than faith, as it extends every way to God and men; it being that by which all the gifts of God which he bestows upon us are made profitable to other men. On the other hand, if we regard man privately in himself, and as relates to his own individual interest, faith is more excellent than charity or love, it being that whereby we become united to Christ, and in which consists our fellowship and communion with him; it is that by which Christ dwells in our hearts, and we receive the promised Spirit; it is that into which, as a hand, God puts all the riches of his grace for our salvation, and by which all the fruits of the Spirit are quickened. By faith we feed upon Christ for the strengthening and nourishment of the soul, and whatsoever is in us is commended unto God. But in regard to duration or permanence, love is to be preferred before faith. For, faith is only for a time; and when the promise of God, which is the matter and subject of it, shall be fully accomplished, the use of it shall cease. When faith passeth into vision or open knowledge, and revealed sight of the thing present, it changes both its nature and kind. But "love never fails," it abides for ever, and shall continue as an everlasting bond betwixt God and us. No doubt it will be greater and more vehement, but it shall still retain the same nature and substance, though some works on which it now exercises itself shall cease. The end of our faith is charity; but the foundation and director of love is faith. Faith also is the victory whereby we overcome the world. Till faith have perfected our salvation, love must yield to it; but having landed us safely over Jordan's streams, love shall continue and abide for ever.—*Ball.*

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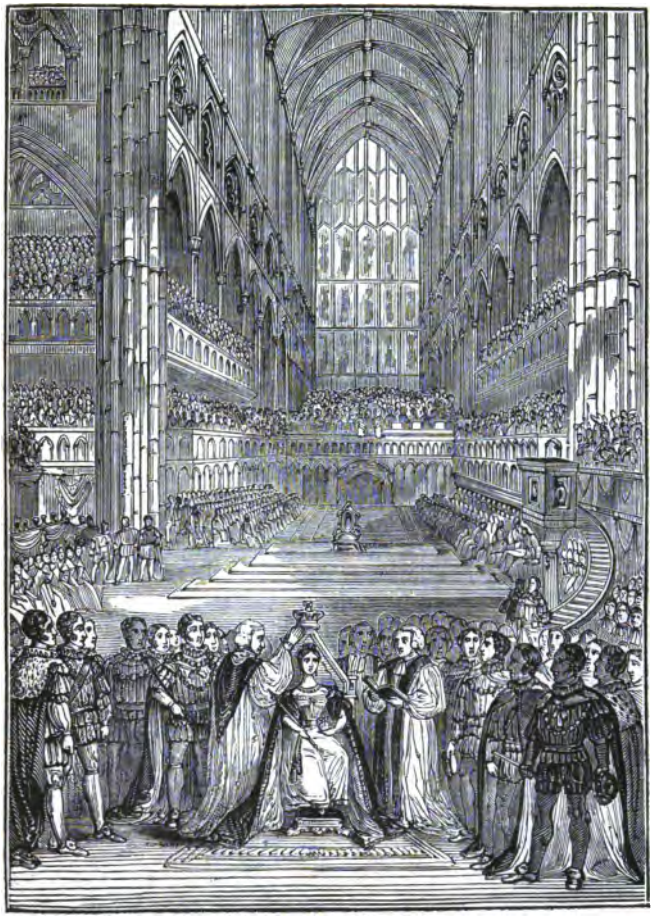

Interior of Westminster Abbey during the Coronation of her Majesty Queen Victoria.

CROWNS AND CORONATIONS.

The event which has recently occurred, has realized public expectation, and proved to be of extraordinary interest. The investiture of our youthful sovereign with the royal crown of so extensive and exalted an empire, forcibly appeals to the mind and the heart; and may suggest a few remarks adapted to the occasion.

If we refer to the remote periods of antiquity, the crown was then rather an idolatrous than a civil ornament. According to Pliny, it was first used by Bacchus. It appears from medals still extant, to have been originally a bandalet, drawn round the head, and tied behind, and then to have been formed of two bandalets; afterwards the woods and groves were searched for crowns to be worn by the various deities of the heathen; and at length, it is stated, that they were made of all known plants. We read particularly of one of laurel; of another formed from the vine; of a third, in which the branches of that tree were blended with its leaves, grapes, ivy, flowers, and berries; while the pine, the olive, the alder, and the myrtle, together with roses, ears of corn, bulrushes, and rosemary, were as freely employed.

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The chaplet conferred in the Olympic games, which were celebrated at Elis, in Greece, with the greatest pomp and magnificence, was composed merely of the branches of the wild olive; but to increase its value, it was pretended that the tree from which it was always taken, was pointed out by the Delphic oracle, and brought to Olympia by Hercules. It was called, moreover, "the tree of the crowns of glory."

This fact is worthy of particular observation, from the reference of the great apostle of the Gentiles to it:—"Know ye not," says he to the Corinthians, "that they which run in a race run all, but one receiveth the prize? So run, that ye may obtain. And every man that striveth for the mastery is temperate in all things. Now they do it to obtain a corruptible crown; but we an incorruptible. I therefore so run, not as uncertainly; so fight I, not as one that beateth the air: but I keep under my body, and bring it into subjection: lest that by any means, when I have preached to others, I myself should be a castaway," 1 Cor. ix. 24—27.

The force of his language, which is as fully applicable to ourselves as the Corinthians, appears to be: "As in these games many run with the utmost energy, for a prize which but one can win, so do ye run the race set before you, with equal ardour and perseverance, that ye all may receive the crown of heaven. Their prize is, indeed, only a fading chaplet; ours is full of immortality. Those, however, who enter the lists at Olympia, submit to a severe regimen: in like manner, I yield to the needed yet painful discipline; to receive the prize will be an invaluable compensation for it all. Be ye, therefore, urged to the same course, by my exhortation, and by my example."

Another circumstance deserving remark, is connected with the Mosaic dispensation. The crown, or head-dress of the high priest, was made of fine linen rolled up, resembling in some degree the turbans still worn in eastern countries; and on it was fastened, by a blue riband or lace, a plate of fine gold, beaten into the form of a leaf, or one of the petals of a beautiful flower, on which was inscribed, "Holiness to the Lord." All who stood before him were thus enjoined to honour his person and ministrations; and to him it was a memorial of the sanctity of his office and character, as the typical mediator between Jehovah and Israel; while, at the same time, he represented the great High Priest of our profession, "who gave himself for us, that he might redeem us from all iniquity, and purify unto himself a peculiar people, zealous of good works," Tit. ii. 14.

A crown appears also to have been used by the Jews in connexion with marriage. Hence the language of the bride, in the Canticles, "Go forth, O ye daughters of Zion, and behold king Solomon, with the crown wherewith his mother crowned him in the day of his espousals," Song of Solomon, iii. 11.

A crown was also the principal mark of dignity bestowed on monarchs and princes. Thus Jehoiada brought forth Joash, the son of Ahaziah, and put upon him the crown, while the priest and his sons anointed him and said, "God save the king." Hence, a crown, in Scripture signifies, in a figurative sense, honour, splendour, or joy.

The apostle Paul uses the same comparison to illustrate the holy joy of Christian ministers over those to whom God has made them a blessing:—"What is our hope, or joy, or crown of rejoicing? Are not even ye in the presence of our Lord Jesus Christ at his coming? For ye are our glory and joy," 1 Thess. ii. 19, 20.

Nor should it be forgotten, that when Jesus shall come "the second time without sin unto salvation," there will await the believer another crown; wherefore he may exclaim: "Henceforth there is laid up for me a crown of righteousness, which the Lord, the righteous Judge, shall give me at that day: and not to me only, but unto all them also that love his appearing," 2 Tim. iv. 8.

Passing from these circumstances of spiritual dignity and blessedness, and adverting to the royalty of our own land, it appears that the Saxon kings wore only a plain fillet of gold. Egbert gave it points or rays, resembling the crowns worn by the emperors of the East, and Edmund, called Ironside, surmounted these points with pearl. Various changes in the British crown have since been made. But the more ancient one having been sold about two hundred years ago, the imperial diadem, which was made for Charles II., was afterwards used. It is formed of four

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crosses pattée, and the same number of golden fleur-de-lis, adorned with jewels: from the former arise four arches which meet at the top, in the form of a cross, having here a mound of gold, enriched with a fillet of the same precious metal, and being also embellished with costly gems. On the mound there is a golden cross, garnished with jewels; and the cap within the crown is of purple velvet, turned up with ermine, and lined with white taffeta. A crown made at the same time, to be worn only at the coronation dinner, is also very splendid: it is adorned with several large diamonds and a great number of pearls; but it is especially remarkable for a ruby set in one of the four crosses, valued at 10,000*l.*, and for the mound being formed of one sea-green stone.

A queen consort has a crown which was made for Catherine, queen of Charles II., and originally called St. Edgitha's crown, in memory of the royal consort of Edward the Confessor.

Another crown has just been expressly provided for our rightful and gracious sovereign Queen Victoria, and is exceedingly costly and elegant. It is composed of hoops of silver, enclosing a cap of blue velvet; the hoops are completely covered with precious stones, surmounted with a ball, adorned with small diamonds, and having on the top of it a Maltese cross of brilliants. In the centre of the cross is a splendid sapphire; the rim of the crown is clustered with brilliants, and ornamented with fleur-de-lis, and Maltese crosses, equally rich. In the front of the Maltese cross, which is in front of the crown, is the large heart-shaped ruby, once worn by Edward the Black Prince. Beneath this, in the circular rim, is an immense oblong sapphire. Many other precious gems of the same kind, together with emeralds, rubies, and several small clusters of drop pearls, also adorn this dazzling and splendid crown.

The venerable abbey at Westminster, where such ceremonies have for ages been performed, has been the scene of its solemn presentation. In the midst of a vast and imposing assemblage, and encircled by her nobility, arrayed in worldly splendour not to be surpassed, the sovereign has been attired in the dalmatic robe of cloth of gold, seated in the chair of St. Edward, and bearing in her right hand the royal sceptre of pure gold, richly studded with precious stones, and in her left the sceptre and the dove; the imperial diadem has been placed on her head; while the loud and repeated acknowledgment within has been responded to in shouts as joyous and fervent without, of "God save the Queen!"

And who that thinks of this interesting ceremony will not most heartily reiterate the petition? A solemn responsibility is connected with so august an exaltation among the sovereigns and nations of the earth. To wear the crown of Britain, so that the people may enjoy all the advantages it is designed to give; that other potentates and powers may feel the influence that it ought to exert; that pure and undefiled religion may flourish throughout our country, and in other parts of the world; and that the tribute due unto his name may be presented to "the Lord of all," on whose head are "many crowns,"—will require no ordinary communications of Divine grace.

May, then, the influences of the Holy Spirit, in rich and increasing abundance, be bestowed on our beloved Queen Victoria! May all that is lovely and hopeful in youth be associated with all that is real and eminent in piety! May "the fear of the Lord be her treasure," and "wisdom and knowledge the stability of our times!" May our country become the Benefactor of countless millions of the human family! And may every blessing the most pious and patriotic heart can desire be associated with the reign of Queen Victoria! W.

THE HEBREW AND PAGAN PROPHETS CONTRASTED.

(Continued from page 255.)

From the scene of pagan imposture and credulity, exhibited by the prophets of Greece, who were the best of the heathen world, (see "Visitor," p. 251,) let us turn to the prophets of the Bible.

5. *Manners and Character of the Hebrew Prophets.*

In every respect we find these prophets the reverse of those before described. They sought no concealment, and affected no mystery; but mingled with society, and lived generally with other men. They were at all times and in all places accessible to such as craved their advice, and this they freely imparted without exacting gifts to gratify their own avarice, or

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requiring ceremonies to work on the fears of those who consulted them. No arts were resorted to, to deceive others into a mysterious dread of their sacredness. It is true that they sometimes used striking symbolical representations, but it was to awaken the attention of a sensual and thoughtless people to their instructions, Isaiah xx. 2—4.

They were sometimes seen in the habiliments of mourning; but it was to manifest the depth of the grief they felt for the sin and the obstinacy of their nation.

In their prophecies there was neither artifice, evasion, nor ambiguity; but they were prompt, direct, and decisive. On occasions of great public interest, they were seen in the most frequented places, enforcing their instructions with the most sincere and impassioned eloquence upon the listening throngs who surrounded them. These public addresses they frequently committed to writing, and we have them in every form, from the simplest prose to the most lofty elevation of poetry. The writings of the Hebrew prophets which have descended to us are so full and complete that we have every facility for ascertaining the usual subjects and general character of their prophecies.

6. *Subjects and character of their prophecies.*

Religion was the great subject on which they loved to dwell, and with them religion was neither an empty sound nor a superstitious ceremonial. The love and worship of one spiritual and holy God, obedience to his law, purity of heart, as the most acceptable sacrifice, an idea beyond even the imagination of a heathen prophet; these constituted the religion of the Hebrew prophets. It was in contemplation of subjects such as these, that their spirits moved with rapture, rose on the wings of a holy enthusiasm to the very throne of the Majesty on high, which no mortal eye but theirs had ever seen, and no mortal tongue but theirs had ever dared to celebrate.

In all their prophecies, it was their constant aim to exert the most salutary moral influence. Calamity they always threatened as the punishment of sin, and prosperity was the sure reward of holy obedience. To the corruptions of their times, they presented independent, bold, and unyielding opposition; ungodly rulers they fearlessly withstood, by severe and public rebuke; and when kings and people united to abolish or disregard the laws of God, these holy men came forth, though hatred, persecution, imprisonment, and death were often the reward of their fidelity, with direct, unequivocal, and solemn declarations of their own abhorrence of such evil designs and of the Divine vengeance against them. Superstitious arts, calculated to impose on the credulity of an ignorant multitude, such as astrology, magic, and necromancy, they pointedly condemned; and the rich presents which were offered them they rejected. Their predictions of future events were public, clear, impossible to be misapprehended, and such as no human foresight could have conjectured.

7. *Illustrations from the Old Testament.*

There is scarcely need to refer to instances of what has now been advanced, for they occur so frequently on the pages of the Old Testament, that no one who has any acquaintance with the Bible will be at a loss to verify this description of the biblical prophets.

You cannot have forgotten how Elisha repelled the princely offers of Naaman, 2 Kings v. 16; how Isaiah publicly and severely rebuked the idolatry of his times; how stedfastly Jeremiah resisted the rebellious designs of his king and nation, though their reproaches and persecutions wounded him so deeply that he wished for death to put an end to his anguish. In the whole character of the Hebrew prophets, we see a frankness which disdained concealment, and a virtue which abhorred deception.

In further illustration of what has been advanced, examine 2 Sam. xii; 1 Kings xviii. 10, 17, 18; xxi. 17—24.

The prophet Nathan did not hesitate to portray in the liveliest colours the sin which had been committed by his sovereign and patron, and boldly to say to the guilty monarch, "Thou art the man."

The prophet Elijah knew that the tyrant Ahab had long been searching all the neighbouring states to apprehend and put him to death, but he fearlessly stood before him, and when the haughty monarch accosted him with the question, "Art thou he that troubleth Israel?" he instantly replied, "I have not troubled Israel; but thou, and thy father's house, in that ye have forsaken the commandments of the Lord; and thou hast followed Baalim."

When the same king had been guilty

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of another act of the most flagrant injustice respecting Naboth, the same prophet went to him with the appalling message; "Thus saith the Lord, In the place where dogs licked the blood of Naboth, shall dogs lick thy blood, even thine. And Ahab said to Elijah, Hast thou found me, O mine enemy? And he answered, I have found thee: because thou hast sold thyself to work evil in the sight of the Lord." Where in the whole body of heathen prophets shall we find a resistance to regal tyranny, a defence of injured and helpless innocence, to be compared with this?

8. *The Contrast.*

And now, is not the difference between the Hebrew and the heathen prophets perfectly obvious? In the one case, we see all the machinery of fraud, a total destitution of moral feeling, and every indication of an exclusive attachment to this world. In the other case we can discover no wish and no opportunity to deceive; we find a most acute moral sensibility and an inflexible adherence to what is right, and a total renunciation of all worldly hopes, whenever they interfered with the calls of duty. The former, just what we should expect from men of this world, who had no faith in another; the latter, just what we should expect from men of God, who had placed all their hopes in heaven. Who, that has any knowledge of the subject, can pretend to place them on equal ground, or say that they have equal claims to Divine inspiration? In the contrast, the interpreter of Greek oracles stands abashed before the Hebrew prophet, like the witch of Endor before the rising spirit of Samuel.

How shall we account for it, that the Hebrews, who were so far below the Greeks in learning, refinement, and power, should rise so far above them in the character of their religious teachers? To the Hebrews were sent "holy men of God," who "spake as they were moved by the Holy Ghost;" while the Greeks, seeking after wisdom, "became vain in their imaginations, and their foolish heart was darkened."

Deficiency in religious feeling, and not the want of appropriate and sufficient evidence, is, after all, the great cause of scepticism in respect to the inspiration of the Bible. In the stillness of sacred retirement, when, if ever, the soul loves to commune with Heaven, let the devout man open the sacred pages, and read till his heart glows with something of the fervour of the inspired writers; and, while his affections are flowing with full tide towards the God of the Hebrew patriarchs and prophets, let him lay aside the Bible, and suddenly turn his attention to any, even the most lofty flights of heathen inspiration; and the painful revulsion of feeling which he experiences shows him at once that he has changed his element, that he has fallen upon another world. The angels who were sent to warn Lot of his danger could scarcely have felt a greater contrast when they left the courts of heaven, to tread the polluted streets of Sodom. The devout man, who reads the prophetic parts of the Old Testament with one spark of the feeling with which they were composed, no more needs a philosophical proof of their Divine origin than Elijah needed a metaphysical demonstration of the existence of God, while ascending to heaven in his fiery chariot; and I suppose no one will consider it a breach of charity to say, that it is not by devout men that the Divine authority of the Old Testament is called in question.

9. *Fulfilment of Prophecy.*

In further illustration of this subject, we will now notice a few of the more remarkable prophecies of the Bible, which, with their fulfilment, the reader is requested to compare with the Greek prophecies already noticed: (see pages 253, 254.)

(1.) Predictions respecting Cyrus, Isaiah xliv. xlv.

About one hundred and fifty years before the birth of Cyrus, the Hebrew prophet Isaiah described this monarch by name,* and intimated, Isaiah xlv. 4, that this was his "surname," and not the name given him at his birth; and accurately foretold the victories he was to achieve, and the benefits which he was to confer upon the Jewish people, by delivering them from the Babylonian captivity. This prophecy was published nearly a century before Nebuchadnezzar subdued Judea. Babylon was then but just rising into notice; the very existence of the empire was scarcely known to the Hebrews; Persia, the native country of Cyrus, was yet in the darkness of barbarism; while Judea was an old established and powerful kingdom. The

* Herodotus informs us, b. i. c. 114, that Cyrus was not the original name of this monarch, but one which he assumed at a later period, probably on his accession to the throne, or after the achievement of some of his great victories.

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accomplishment of this prediction, therefore, would appear to the politicians of that age as improbable, as it would appear to modern politicians, if they were told that the United States, in the course of a century, would fall under the dominion of one of the new and still tottering republics of South America, and would finally be delivered from their bondage by a powerful monarch of the north-west coast, now only thinly inhabited by Indian tribes. To this prophecy Jehovah appeals, as has been already observed, as an instance of foreknowledge altogether beyond the reach of the heathen prophets, and a triumphant proof, that he alone is the true God, and his prophets the only true prophets.

"Assemble yourselves," says he, "and come; draw near together, ye that are escaped of the nations: they have no knowledge that set up the wood of their graven image, and pray unto a god that cannot save. Tell ye, and bring them near; yea, let them take counsel together: who hath declared this from ancient time? have not I the Lord? and there is no God else beside me; a just God and a Saviour; there is none beside me. Look unto me, and be ye saved, all the ends of the earth: for I am God, and there is none else," Isaiah xlv. 20—22.

2. Predictions respecting Babylon.

In close connexion with the preceding are the predictions of Isaiah and Jeremiah respecting the overthrow of Babylon, the fulfilment of which we will now consider. Of these predictions, that of Isaiah was uttered one hundred and sixty years, and that of Jeremiah fifty-six years before the event. Compare Jer. l., li. The historical proof on this subject is entirely conclusive. It cannot be said, therefore, with any show of reason, that these prophecies were written after the events.

The circumstantial particularity of these predictions, their antecedent improbability, their progressive accomplishment through a long series of ages, and the great variety of the events predicted, render it equally impossible to account for these prophecies on the ground that they were sagacious and happy conjectures.

To enable the reader to make the comparison for himself, I will exhibit the predictions in the words of the prophets, and in succeeding order the account of the events in the words of the classic historians, relying principally on Herodotus and Xenophon. The first of these historians lived two hundred and fifty years after Isaiah, and one hundred and fifty after Jeremiah, and the latter three hundred and fifty after Isaiah, and two hundred and fifty after Jeremiah.

Babylon was considered impregnable. Its high and strong walls surmounted by lofty towers, its broad and deep ditches, its large magazines, and the numerous squares within the city, which were planted with corn, and yielded an annual supply of provisions, seemed sufficient to secure the inhabitants for ever from all attacks of their enemies, Jahn's Heb. Com. p. 152.

Some of the more remarkable circumstances of its capture and subsequent fate, exhibiting the coincidence between prophecy and history, are the following:

[1.] *The besieging army to consist of various nations.*

PROPHECY.

Go up, O Elma: besiege, O Media, Isa. xxi. 2.

The noise of a multitude in the mountains, like as of a great people; a tumultuous noise of the kingdoms of nations gathered together: the Lord of hosts mustereth the host of the battle. They come from a far country, from the end of heaven, Isa. xiii. 4, 5.

Set ye up a standard in the land, blow the trumpet among the nations, prepare the nations against her, call together against her the kingdoms of Ararat, Minni, and Ashchenaz; appoint a captain against her; cause the horses to come up as the rough caterpillars.

Prepare against her the nations with the kings of the Medes, the captains thereof, and all the rulers thereof, Jer. li. 27, 28.

HISTORY.

While Cyrus was on his march to Babylon, we find him issuing the following orders to his troops: 'Let Artabazus lead the Persian (Elam) shieldsmen and archers; after these, let Andramias the Mede, lead the Median foot; after these, Embas the Armenian (Ararat) foot; after these, Artuchas, the Hyrcanians; after these, Thambradas, the Sacian foot; after these, Damades, the Cadusians.'.....'And do you all attend ready on the road to Babylon, each of you with all things proper,' Xenophon, Cyrop. b. v. c. iii. 38.

While the army lay at Babylon, there are mentioned among his soldiers, in addition to the above, the Phrygians, Lydians, Arabians, and Cappadocians, Ib. b. vii. c. v. 15.

The Hebrew name *Elam* corresponds to the Greek Persia and Ararat, and Minni to Armenia and the neighbouring northern countries; the locality of Ashkenaz is less certain.

[2.] *The river to be dried up, the gates to be left open, and the city taken by surprise, during a night of revelry and drunkenness.*

The reader should recollect, that the river Euphrates passed through the midst of Babylon; and that besides the external wall, there was a wall on each side of the river, and the only entrance

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to the city from the river was by brazen gates, which were carefully closed every night. The river here was a quarter of a mile in width, and more than twelve feet deep, Herodotus, b. i. c. 180, 181.

PROPHECY.

God saith to the deep, Be dry, and I will dry up thy rivers, Isa. xliv. 27.

A drought is upon her waters; and they shall be dried up, Jer. l. 38.

I will dry up her sea, and make her springs dry, Jer. li. 36.

I will loose the loins of kings, to open before him the two-leaved gates; and the gates shall not be shut, Isa. xlv. 1.

In their heat I will make their feasts, and I will make them drunken. And I will make drunk her princes, and her wise men, her captains, and her rulers, and her mighty men, Jer. li. 39, 57.

The night of my pleasure hath he turned into fear unto me. Prepare the table, watch in the watch-tower, eat, drink: arise, ye princes, and anoint the shield, Isa. xxi. 4, 5.

Therefore shall evil come upon thee; thou shalt not know from whence it riseth; and mischief shall fall upon thee; thou shalt not be able to put it off: and desolation shall come upon thee suddenly, which thou shalt not know, Isa. xlvii. 11.

But these two things shall come to thee in a moment in one day, the loss of children, and widowhood; they shall come upon thee in their perfection for the multitude of thy sorceries, and for the great abundance of thine enchantments, Isa. xlvii. 9.

HISTORY.

Cyrus placed one detachment of his forces where the river first enters the city, and another where it leaves it, directing them to enter the channel, and attack the town, wherever a passage could be effected. He pierced the bank, and introduced the river into the lake, by which means the bed of the Euphrates became sufficiently shallow for the object in view. The Persians in their station watched the proper opportunity, and when the stream had so far retired as not to be higher than their thighs, they entered Babylon without difficulty. If the besieged had either been aware of the designs of Cyrus, or had discovered the project before its actual accomplishment, they might have effected the total destruction of these troops. They had only to secure the little gates which led to the river, and to have manned the embankments on either side, and they might have enclosed the Persians in a net from which they could never have escaped. As it happened, they were taken by surprise. It was a day of festivity among them; and whilst the citizens were engaged in dance and merriment, Babylon was, for the first time, thus taken! Herodotus, i. 191.

By comparing the prophecy with the history, it will appear that every circumstance known to the historian after the event, had been foretold by the prophets long before.

I will here subjoin the account of the taking of Babylon, as given by Xenophon, which includes some particulars not mentioned by Herodotus.

Cyrus "measuring out the ground around the wall, and from the side of the river, he dug round the wall on every side a very great ditch. When he heard they were celebrating a festival in Babylon, in which all the Babylonians drank and revelled the whole night; on that occasion, as soon as it grew dark, he took a number of men with him, and opened the ditches into the river. When this was done, the water ran off in the night by the ditches, and the passage of the river through the city became passable." "Then making those that attended his person, both foot and horse, to go down into the dry part of the river, he ordered them to try whether the channel of the river was passable." They reported that it was. Cyrus then addressed his troops, and concluded by saying, "Do you, Gobryas and Gadatas,* show us the ways; for you are acquainted with them, and when we are got in, lead us the readiest way to the palace. It may be no wonder, perhaps, said they that were with Gobryas, if the gates of the palace are open; for the city seems to-night to be in a general revel, but we shall meet with a guard at the gates, for there is always one set there." "When this was said, they marched; and of those that they met with, some they fell on and killed, some fled, and some set up a clamour. They that were with Gobryas set up a clamour with them, as if they were revellers themselves, and marching on the shortest way that they could, they got round about the palace." "As soon as the noise and clamour began, they that were within, perceiving the disturbance, and the king commanding them to examine what the matter was, ran out, throwing open the gates. They that were with Gadatas, as soon as they saw the gates loose, broke in, pressing forward on the runaways, and dealing their blows among them, they came up to the king, and found him now in a standing posture, with his sword drawn. They that were with Gadatas and Gobryas, being many in number, mastered him; they likewise that were with him were killed." "Gadatas and Gobryas then came up, and having first paid their adoration to the gods, for the revenge they had had on their impious king, they then kissed the hands and feet of Cyrus, shedding many tears in the midst of their joy and satisfaction," Cyropaed. B. vii. c. 5.

The death of the king, as described by Xenophon, had been predicted by the prophet in these words:—"But thou art cast out of thy grave like an abominable branch, and as the raiment of those that

* These were two Assyrian noblemen who had gone over to Cyrus, on account of the cruelties practised upon them by the Babylonian king.

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are slain, thrust through with a sword, that go down to the stones of the pit; as a carcase trodden under feet," Isa. xiv. 19.

The joy occasioned by his death was predicted with equal clearness.

"The whole earth is at rest, and is quiet; they break forth into singing. Yea, the fir-trees rejoice at thee, and the cedars of Lebanon, saying, Since thou art laid down, no feller is come up against us," Isa. xiv. 7, 8.

[3.] *The place to be for ever uninhabited, a dwelling of wild beasts, and a place of stagnant waters.*

PROPHECY.

And Babylon, the glory of kingdoms, the beauty of the Chaldees' excellency, shall be as when God overthrew Sodom and Gomorrah.

It shall never be inhabited, neither shall it be dwelt in from generation to generation; neither shall the Arabian pitch tent there; neither shall the shepherds make their fold there.

But wild beasts of the desert shall lie there; and their houses shall be full of doleful creatures; and owls shall dwell there, and satyrs shall dance there.

And the wild beasts of the islands shall cry in their desolate houses, and dragons in their pleasant palaces, Isa. xiii. 19—22.

And Babylon shall become heaps, a dwelling-place for dragons, an astonishment, and an hissing, without an inhabitant. They shall roar together like lions; they shall yell as lions' whelps, Jer. li. 37, 38.

I will also make it a possession for the bittern, and pools of water; and I will sweep it with the besom of destruction, saith the Lord of hosts, Isa. xiv. 23.

HISTORY.

The Persians destroyed a part of the city, time and the negligence of the Macedonians destroyed a part. It is now almost entirely deserted, so that we may safely say of it, what a certain poet said of Megalopolis, the great city of Arcadia; 'The great city is now a vast solitude,' Strabo, b. xvi.

Babylon, once the greatest of all cities which the sun ever looked upon, has now nothing left but the walls, Pausanias, b. viii. c. 33.

I have learned from a certain Elamite brother, who came from those parts, and now lives as a monk in Jerusalem, that the royal hunting grounds are in Babylon; and that wild beasts of all kinds are kept within its walls, Jerome, Com. in Isa. c. 13.

I soon distinguished that the causes of our alarm were two or three majestic lions, taking the air upon the heights of the pyramid. We then rode close up to the ruins; and I had once more the gratification of ascending the awful sides of the tower of Babel. In my progress, I stopped several times to look at the broad prints of the feet of the lions, left plain in the clayey soil; and by the track, I saw that if we had chosen to rouse such royal game, we need not go far to find their lair. But while thus actually contemplating these savage tenants, wandering amidst the towers of Babylon, and bedding themselves within the deep cavities of her once magnificent temple, I could not help reflecting on how faithfully the various prophecies had been fulfilled,' Sir R. K. Porter.

The tower is still to be seen, and is half a league in diameter, but is so ruinous, so low, and so full of venomous creatures, which lodge in holes made by them in the rubbish, that no one durst approach nearer to it than within half a league, excepting during two months in the winter, when these animals never stir out of their holes, Rauwolf.

Not only great part of this plain is little better than a swamp, but large deposits of the waters are left stagnant in the hollows between the ruins; again verifying the threat denounced against it,' Sir R. K. Porter.

I have been thus minute in pointing out the fulfilment of this prophecy, because it can be taken as a fair representative of the whole class of the biblical prophecies, as contrasted with the heathen oracles, of which some examples have been given. For further particulars the reader may consult Lowth's Isaiah, Newton on the Prophecies, Diss. x., Keith's Evidences of Prophecy, and Rollin's Ancient History, b. iv. chap. i. art. 2. It was for her unexampled licentiousness, her pride, and her cruelty, that Babylon was thus laid desolate, as the prophets repeatedly declared. See Robinson's Calmet, Art. Babylon.

The most recent and accurate observer of the stupendous ruins of this ancient city, is Sir Robert Ker Porter, who visited them in 1820. He found them in all respects confirming the accuracy of the prophetic writings. See his Travels, vol. ii. p. 305—405.

Some of the earliest and most minute of the prophecies are in a course of literal accomplishment even at the present day. For example, the remarkable predictions of Moses respecting the Jewish nation, Deut. xxviii.

The predictions respecting the sufferings and death of Christ, Isa. lii. 13—liii. 12; and those of Christ respecting the destruction of Jerusalem, Matthew xxiv., are discussed by Dr. Paley, with his usual skill and irresistible power of demonstration in his Evidences, Part ii. chap. i.

It would carry me far beyond my limits, to go into an extended statement of the fulfilment of Scripture prophecies. Nor is it necessary; for my only object in this chapter has been, as stated in the outset, by contrasting the Hebrew with the heathen prophets, to show—That the former, and they only, have just claim to Divine inspiration. The specimens already given are, I suppose, abundantly sufficient to accomplish this purpose.

From C. E. Stowe.

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ROSE AND CROWN LANE:

OR,

A SKETCH OF MY NEIGHBOURHOOD.—No. VII.

I AM sorry to speak of No. 7 as a nuisance to the Row, especially as one head of the family is a person who has made some profession of religion; for, sad as it is to see persons who are utterly ignorant and ungodly go wrong, it is yet more sad to see professors of religion disgracing instead of adorning it. I have already had occasion to disclaim an unkind, censorious, mischief-making spirit; and in the present instance, though truth compels me to mention circumstances which are disgraceful to the parties, I do it not from feelings of ill-will to them, but with an earnest wish that my readers and myself may be led strictly to examine our motives and principles in taking up a religious profession, and constantly to walk consistently with it.

In the days of her youth, Mrs. Sims lived servant in the family of Mr. Robinson, the lawyer. Mr. and Mrs. Robinson were religious people, and Mrs. R., in particular, was very zealous in her endeavours to promote religion among her children and servants. I have no doubt she always meant well, but I am afraid her zeal was not always according to knowledge. There are two particulars in which I think she erred; and I fear her errors are not singular. Love to the house of God has been an invariable characteristic of his people in all ages; but even this requires to be regulated and brought into harmonious completeness with the due discharge of every other duty. Hannah of old knew and valued the privilege of public ordinances; but there were seasons when, without any thing like declension of spirituality and zeal, "she went not up," 1 Sam. i. 22, because maternal duties required her presence at home. David, than whom no man ever manifested greater attachment to the sanctuary, neglected not in due time to return to bless his household, 2 Sam. vi. 20. The good woman to whom I have referred, presented one of these features in full prominence, but somewhat failed in the others. She was a great hearer of sermons—at least three on the Sabbath; besides which, almost every evening in the week was devoted to some religious meeting or other. Now, had she been an unconnected individual, with her time at her own disposal, and had she found this the most profitable way of spending it, there would have been no room for censure; but considering her as the mother of seven or eight children, and the mistress of three or four servants, who on these occasions were left without control, perhaps an enlightened conscience would sometimes have suggested the appeal, "Who hath required this at your hands?" But conscience is not unfrequently bewildered by a partial or disproportionate view of duty; and perhaps the good woman, while conscientiously seeking to embrace every opportunity for her own spiritual gratification and profit, in some degree overlooked the corresponding duty of letting her profiting appear unto all, especially to them of her own house. Let it not, however, be supposed, that either she or her husband were regardless of the welfare of those committed to their charge. The family was always—it cannot be said regularly, for late evening engagements, committee meetings, etc. have a strong tendency to break in upon domestic regularity; and an especial degree of good management is requisite to harmonize the various public, social, and domestic claims on the attention of heads of families;—however, whether early or late, the family was daily assembled for reading and prayer; the children were required to learn catechisms, and the servants were furnished with books, perhaps not always the most judiciously selected. Besides this, when indisposition, unfavourable weather, or any other circumstance occasioned a break in Mrs. Robinson's out-of-door engagements, she generally took the opportunity of giving an address to her children and servants. This was of such a strain as to act upon the feelings rather than upon the judgment or conscience. Death-bed conversions and joyful experiences were among her favourite topics. These narrations excited her own feelings, and perhaps awakened a momentary sympathy in the feelings of her audience, which she too hastily construed into evidences of piety; and, congratulating herself on the happy result of her endeavours, encouraged the parties to make a profession of religion. In several instances, these persuasions have been yielded to, it is to be feared, without due consideration. A public avowal of regard to religion was the sure way to favour and indulgence from Mrs. Robinson; it tended rather to put the person upon better terms with herself, and it did not necessarily involve any very inconvenient degree of strictness

and self-denial, especially in a house where the frequent absence of the mistress left the servants pretty much at liberty to pursue their own inclinations. A set of religious phrases is easily acquired and adopted; and the aptitude with which they were used by the young people in Mrs. Robinson's family seemed fully to satisfy herself, and to call forth the applause of her friends, on account of her excellent and successful religious instructions, though they were unaccompanied by any substantial evidences of piety. The expressions of a dying child were detailed with great complacency; confident expectations were cherished of living children that, despite of bad tempers and deceit, they would rise up eminent Christians; and servants were enumerated who had entered the family totally ignorant of religion, but in the course of a few months had become eminently pious. Alas! a few years have proved the worthlessness of this superficial kind of religion: the sons of the family, in leaving the parental roof, have every one cast off the form of godliness, and plunged into dissipation and scepticism; the daughter has been a grief to her parents by her connexion with an irreligious man; and each of the servants referred to has, in some way or other, disgraced that profession which they never ought to have made. The father is dead; and the mother, instead of realizing the fond expectations she once cherished, has to mourn that her ill-directed efforts have produced actual injury to the cause she was endeavouring to promote.

My neighbour, Mrs. Sims, was a favourite servant of Mrs. Robinson, and was treated by her with a confidence which she did not deserve. While her unsuspecting mistress regarded her as a paragon of piety and fidelity, and permitted the frequent visits of her suitor, because he professed to be pleased with the privilege of coming to family worship, rumours were afloat in the neighbourhood that there were other and more powerful attractions; and that Fanny was in the habit of making free with the pantry, the strong beer barrel, and the decanter, for his entertainment. More than once Mrs. Robinson received a hint on the subject, but by an excessive stretch of charity she satisfied herself that one who professed so much could not act so unworthily; forgetting how little stress had been laid in her instructions on the practical part of religion, and that in fact Fanny had been taught little more than to utter religious phrases. However it might be, Fanny contrived to keep in her mistress's good graces until she married away. Her husband, Sims, the tailor, is quite an every-day sort of character, taking the tinge of those with whom he associates, and having no very distinguishing features of his own. While he visited Fanny at Mr. Robinson's, he conformed to the habits of the family, and frequented public worship; after they were married, he continued to accompany his wife, and treated with civility any religious acquaintances who happened to call on her. He was generally well thought of, but never, I believe, took any decided step in religion. What he might have done, and what he might have been by this time, if his wife, who possesses much more natural energy of character than himself, had constantly exhibited to his view religion in a consistent and attractive form, must remain a question.

Her connexions helped him forward in his business, and her activity and gumption kept his house in order, and promoted his worldly interests; but her domineering spirit destroyed his comfort, and he saw so much treachery practised upon others, that at last he was led to suspect there was no sincerity towards himself: and from one circumstance and another, they have for years led a very unhappy life together.

As family cares increased, religious observances declined. For very trifling causes Fanny could absent herself from the sanctuary for weeks together. Her husband had then no stimulus to go, and soon sunk into habits of indifference, sloth, and indolence. The minister on whom they had been used to attend, called again and again to admonish them on their sad declensions. Old Mrs. Robinson also called to expostulate with Fanny; but she had always some plausible excuse ready. She could not admit that her love of good things had abated, but pleaded illness in herself or her children, or the misconduct of her husband, or any thing rather than taking blame to herself. Her friends hoped the best, and wished that her circumstances were more favourable.

Instead, however, of improvement, matters became worse and worse. Fanny's temper was more violent and turbulent than ever. Her husband was often

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driven to the public-house. The house of God was altogether deserted by both; business was in a great degree neglected; and even the spirit of household industry and cleanliness declined. The change seemed almost as unaccountable as it was painful, except to those who knew something of the history and character of the religious profession that had been made, and of the vice by which its abandonment had been accelerated.

Fanny Sims, in the house of her mistress, when such unwarrantable confidence was reposed in her, acquired a ruinous habit of self-indulgence in the use of stimulating drinks. When she became mistress of her own house, the propensity remained, but was somewhat checked by the inconvenience of gratifying it at her own expense; and for a time she was content to share her husband's pint of beer; but some opportunity of occasional indulgence, or some circumstance of indisposition or vexation, aroused the slumbering tiger within. She suffered herself secretly to indulge the wretched habit, and secretly to provide the means of doing so. Suspicion had more than once fallen on the family of Sims, of dishonesty to the master, by whom himself, his wife, and his eldest son were employed. At length the matter was scrutinized, and Mrs. Sims was convicted of having embezzled property to a considerable amount. The master forbore to prosecute, but dismissed the family from his employment. Mrs. Sims gave a different version of the story, and described herself as a cruelly injured woman. Her husband, it is generally believed, was not aware of her proceedings; he, however, shared in her punishment, and his mind became increasingly embittered against her; and, what is still worse, hardened in his aversion to that religion of which she had been so unworthy a professor.

Meanwhile, the children are growing up, as the children of inconsistent professors usually do, far worse than those who have lived in total ignorance. The boys are continually fighting and making a scuffle in the neighbourhood; and one of them has been actually imprisoned for making a disturbance in that very place of worship to which his mother formerly professed so much attachment. The girls are giddy, vain, and indiscreet, and are already found mingling in the society of those who will almost infallibly lead them into mischief and ruin. They are the more endangered by the present occupation of their parents, who, being thrown out of regular employ, have opened their house as a beer-shop, and laid out the little garden for a low kind of gambling.

This, it may be supposed, is a great annoyance to the landlord of the Rose and Crown, and he has made several efforts to get rid of his tenants, but hitherto without success. The magistrates, too, have interfered, and put a stop to the skittle-playing; but some other game has since been adopted, which is so contrived as to elude the letter of the law, though not in itself less mischievous. It is said that they will certainly be displaced next quarter; if so, I hope the house will be occupied by some more desirable neighbours. Meanwhile, it is grievous to see men in the prime of life wasting their time, injuring their health, consuming their property, and robbing their families, by drinking and gambling; youths dropping in to catch the demoralizing infection; and even the little children of the family learning to imitate the actions, and listening to the profane and polluting discourse of the drunkard and gambler: above all, to see the mug and the glass handed to them, by her who once professed to love such very different pleasures and pursuits; to see her join in the coarse joke, and laugh at the rude familiarity by which her daughters are insulted. One shudders to think of her condition. Familiar as she is with those sacred truths which are the appointed means of turning the sinner from his sins, and directing his feet in the way of life, what new means can be tried? If the word of God, which is as a hammer to break the rock in pieces, has been struck and struck till it leaves no impression, from what other instrument can success be hoped for? Such characters appear almost beyond the reach of reproof and expostulation; but the things that are impossible with men, are possible with God. The case, discouraging and desperate as it is, is not beyond the reach of Divine agency. Means must still be tried, and efforts made to reach the slumbering conscience, and fervent prayers may yet be continually offered, that this unhappy family may indeed be brought under the power of real religion, which begins, not in loud profession, but in deep contrition, and which exerts a universal, sanctifying, and saving power.

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THE PERAMBULATOR.

EXCURSION TO FRANCE.

PART II.

Dieppe—Hotel Roi d'Angleterre—Sudden Storm—Deplorable Condition—French Cookery—Frogs—Gendarmes—Fish Carts—Ornamented Horses—Riding double—Magnificent Scene—Trees, Peasants, Women—A Market in Normandy—Chapels and Crucifixes — Implements of Husbandry — Chateaux — Gizors — The Church — Diligence—Mingling of different classes—Objectionable Ejaculation.

After going to the custom-house at Dieppe, and showing our passports, five of us proceeded to the Hotel Roi d'Angleterre, kept by Madame Delarue.

Before taking any refreshment, I went with the gentleman whose throat had been injured against the bulwarks of the steamer, in quest of Doctor Scott. The doctor was snugly tucked up for the night, but our rude alarum summoned him from his slumber.

It is a merciful arrangement of Divine Providence, that the very wants of his creatures become sources of enjoyment! What would the most delicious repast be without hunger? the clearest water without thirst? and the means of repose without weariness? On my return to the hotel, I banqueted on the refreshment set before me, and with a grateful heart to Him who "maketh the storm a calm, so that the waves thereof are still," who preserveth the mariners on the watery deep, and "bringeth them into their desired haven," retired to slumber.

Dieppe, the quay, with its large crucifix, all bustle and confusion, thronged with porters; the churches, the inns, the houses, and the people, were full of interest; they had all the freshness of novelty. I walked from street to street, entered the shops, visited the promenades, every thing was strange. A child in a toy-shop for the first time in his life, gazing on a profusion of battledores and shuttlecocks, puzzle-boxes, penny trumpets, drums, and rocking-horses, would scarcely be more excited.

I expected to find in France a new world, wherein all things would be different to what I had been accustomed to see: that the cocks should crow, the frogs croak, and the trees of the field grow in the same manner as in England, was hardly a thought to be entertained. And truly this impression was not altogether an incorrect one, as to many things; for the general face of the country, the men, women, and children, the birds, beasts, fishes, and reptiles, had all a peculiar character.

The dress, language, and manners of the people, were of themselves enough to secure continual attention. Here was a man in a cocked hat, there another in a blue frock, and yonder a fish-woman in her short red petticoat, holding a long fish by the head and tail, as it hung round her neck like a lady's boa.

Dieppe, dirty as it was, pleased me; its old-fashioned, overhanging houses, its harbour crowded with merchant-vessels, its castle, and its church of St. Jacques, were attentively observed. The narrow and grotesque streets of the place are enlivened by the peculiar dresses of the lower and middle classes of females. Women and girls with coloured head dresses half a yard high, are seen in all directions, some with red cloaks, some with red gowns, and others with red petticoats.

The Roi d'Angleterre was well attended, and the table d'hôte, or public dinner table, was well supplied with dishes and company. The English, French, Italian, Dutch and German languages were spoken, so that no one could be altogether a stranger to what was said. Towards the upper end of the dinner table, sat a clever, elderly, political gentleman, who talked much in English and French, and spoke with some asperity of the lesson he yet intended to teach the English ministers. The conversation took a serious turn, when he quoted the text from Scripture, "No man hath seen God at any time," and added, "and no man ever will."

I left Dieppe on foot, for Bois Robert and Pomereval, and when between the two places, was caught in a storm. The lightning was fearful, and the thunder, like the roar of artillery, was incessant. The rain fell in torrents, drenching me to the skin.

Observing a thick wood on my right, I crossed a corn-field, to obtain the shelter it promised to afford me. The grain was saturated with wet, and my light clothing was in a woful plight. Clambering over a fence, I got into the wood, which was dark with the overhanging branches of large trees. "Now," thought I, "should I meet with a wolf, what an adventure it would be!"

Nothing could be more disconsolate than my situation on emerging from the wood. I was hungry and thirsty; my

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clothes as wet as if I had been dragged through a pond, and my chip hat, as I took it from my head, parted in two. With the rim in one hand, and the crown in the other, I walked on. "Misery," said I to myself, "this must be very like thee."

There was something so odd, so new, and so ludicrously disconsolate in my situation, that I seemed to gather strength from my very adversity. "Exercise and the sun," thought I, "will soon dry my light clothes; a needle and thread at the first café will join the two parts of my hat together, while a couple of eggs, or a fish, or a 'bifteak,' with a glass of 'forte bière,' or a cup of coffee, will supply all my wants."

It was even so; for the sun broke out in all his glory, and a guinguette, or little public-house, by the way-side provided me a sempstress, and a broiled fish, and abundantly satisfied my necessities.

The French mode of cookery is to many Englishmen very unpleasant. We like to know what we eat, and this, in France, is not easily ascertained. We like the flavour of the meat, but, too often, French cooks take it away, and supply its place with that of oil and spices, and sorrel and garlic; and we dearly love cleanliness; and this is a quality for which the French are not remarkable. Nothing can be more common in France, when you are not at first-rate inns, than to have placed before you a dirty table-cloth, with brown salt, in coarse grains, and if you are favoured with a silver fork, it is pretty sure to be accompanied with a rusty knife.

Some time after quitting the guinguette, a strange, and somewhat fearful noise arrested my attention: as I proceeded, it increased; to my astonishment I traced it to a pond of frogs. If the fearful noise of the frogs amazed me, so did their size and appearance. They were very large, and of a beautiful green colour, with yellow round the mouth, and on a part of the head. Their eyes were particularly fine. The loud noise they made at times resembled that of a duck sucking up mud with her bill, then the cry of a corndrake, running about in the fields, and afterwards it was like the shrill sound of water dropping from an inverted bottle, but twenty times louder.

Several times as I walked on, my passport was demanded by the mounted gendarmes whom I met.

Fish must be an article of great consumption among the French; for a great number of fish-carts, longer than English wagons, clumsy looking things, running on two wheels, passed me: the horses generally employed are almost as large and strong as English cart-horses; but they dash forwards with these fish carts, at the rate of six or seven miles an hour. One passed me on the full trot, piled up almost to a point; on the top was placed a plank, and upon this plank, stretched at full length, apparently asleep, lay the reckless driver.

Some of the horses are highly decorated, and most of them have cloths or hangings over them of different colours, with long tassels; generally the first horse has a high collar ornament, from which bells are suspended.

In England, it is a rare thing now to see a horse carry double. A woman mounted on a pillion, with a man riding before her, is almost an obsolete sight: in France something like this mode of travelling appears much to prevail. Every now and then a horse jogged by me laden with two persons, but the woman rode before, and the man invariably behind.

There are many temptations, even in ordinary cases, to draw a perambulator from the beaten path; no wonder that in a country where every thing was new to me, I should be allured by scenery and circumstances on the right hand and on the left. So often did I wander to and fro, that night came upon me unawares, and glad was I to enter a small house of entertainment, in a little village. A mackerel broiled on the gridiron was prepared for me, and while I feasted on my fish, the host and his family surrounded a large wooden bowl, all handling their spoons with persevering dexterity till the mess it contained had disappeared.

My pocket dictionary was in great request; for not only was it necessary for me frequently to refer to it, but my host, after obtaining permission to open it, was so much pleased with its contents, that it furnished amusement to the whole family, they asking me to express in English what I required them to pronounce in French. A book appeared to be a novelty to them, especially one with English words in it.

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My bed-chamber was none of the best: the pallet was hard, and the sheets coarse, and far from clean; neither was the matter mended by the circumsfance of three or four parties being accommodated in different nooks of the same domicile. When I stretched myself at full length in my crib, the rafters of the roof, profusely ornamented with accumulated cobwebs, were within three feet of my face. I observed that when the family retired to their repose, neither sons nor sire bent the knee, or offered up praise or prayer to the Father of mercies, for daily blessings or nightly protection.

Soon after sunrise, I journeyed on to Forges, near which a magnificent scene of great extent burst upon me, the sunlit sky, and the beautiful scenery, much excited me: it was a moment of intense enjoyment, a feeling of liberty, a pleasurable sense of novelty, and a strong emotion of thankfulness to the Giver of all good, came over me, and brought the tear-drops into my eyes. Something like this I have felt on the summit of the Skiddaw, Malvern Hills, the Wrekin, and again when wandering among the romantic scenery of Derbyshire, and gazing on the lakes of Westmoreland and Cumberland. I speak not of a mere admiration of natural objects alone, but also of a deep, reverential conviction of His goodness who has so profusely adorned even the temporary dwelling-place of man. Seasons of this kind are precious; there is more of the bliss of existence, more of the free outpouring of the heart to the Almighty Maker of heaven and earth, crowded into the brief space of such a moment, than is to be found in a year of every-day emotions.

I breakfasted at Forges, and called at the porcelain depôt of Monsieur Hood; but was politely informed that strangers were not admitted. As I journeyed on, the manners and customs of the people, and the varied objects around me, fully occupied my attention.

The trees of Normandy are small, the oak, the poplar, the beech, and the hazel, appeared of stunted growth; a fine timber tree was not to be seen. The stems of the fruit trees were generally wrapped round with twisted hay. The vineyards cut but a poor figure; my imagination had represented trees somewhat resembling those seen in our English hot-houses. I had expected to walk beneath luxurious branches, bending down with fruit; but instead of these, straight, formal rows of grape-vines, not three feet high, stretched across the fields.

The peasants were dressed in short frocks, similar to those worn by our country people, only they were blue, so that they appeared to me like so many butchers at work in the fields.

The dress of the women in Normandy is very becoming. At no great distance from the public road, both on the right hand and on the left, were long lines of women at work. At first sight, I thought they were ladies, or the scholars belonging to establishments in the neighbourhood; for their blue and red clothing, white stockings, high head-dresses, and flowing lappets, fully warranted my supposition.

One of the most attractive sights that I remember was a market in Normandy, attended by the country maidens, with their produce for sale. It was a perfect picture! Such neatness, cleanliness, taste, variety, and attention to colours in female dress, are not to be found in English markets.

Roman Catholic chapels, crucifixes, and alms-boxes dedicated to saints, are very common by the way-side; and here and there are houses with projecting windows, at which three or four neatly dressed girls may be seen making lace. Most of the women that you meet in Normandy wear wooden shoes over their others.

In England, it is the custom with mowers for the whole party to take the stroke with their scythes at the same time, but in France every one acts independently. A more singular sight can scarcely be imagined than the spectacle of half a dozen labourers, mowing in this irregular manner.

Many of the implements of husbandry seemed to me to be of a poor description; the hay-forks were of wood, and not of iron. Instead of pitching the hay loose into the wagon, the French hay-makers tie it up in large round bundles, piling them up on the wagons very high. Thistles, docks, and weeds, are extracted by an instrument with two long handles; stooping is therefore unnecessary. The roads are, for the most part, paved in the centre, and not on the sides, having a double avenue of trees, one on each side. Many of these par-

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ticulars may appear trifling; but in the eye of a perambulator they are not without interest.

Between Gournay and Gizors, several elegant chateaux of the pepper-box kind were seen in the distance. The charge for my dinner at a guinguette, was a franc, (ten-pence:) for this I had eggs fried in butter, vegetables, bread, cheese, and a bottle of porter. A bottle of cider, near Gournay, cost me two sous, (one penny;) it held about a pint.

Many of the buildings at Gizors are good, and the church struck me as very beautiful, being exceedingly rich in figures and architectural decorations. The very mutilations occasioned by time added to the interest of the venerable pile; it was injured, but not ruined; it was grandeur decaying, not decayed. The public walks appeared adapted to different dispositions, possessing all that gaiety could covet, or solitude require.

It seemed odd that it should be so; but I appeared to excite almost as much attention as a Turk or a Lascar does in a provincial town in England; this was, no doubt, occasioned by the peculiarity of my clothing. Such a situation is an excellent school of philosophy to a perambulator! Another circumstance, too, was somewhat tantalizing. Although I spoke the very best French I could summon to my assistance on the occasion, the provoking people would not comprehend me on any other topic than that of my immediate wants.

The landlord at the auberge where I stopped, was asked, according to custom, to drink brandy with most of his guests, on parting with them. A gentleman and lady each took a small glass with the host, touching glasses first by way of courtesy and good fellowship, the gentleman then saluted the lady on both cheeks, and handed her into the diligence.

The entrance of a diligence into a town is announced by a cloud of dust, a cracking of whips, a ringing of the bells on the horses' foreheads, and by as much noise and confusion as Monsieur le Conducteur and Monsieur le Postilion can make. The diligences are neither like post-chaises, coaches, nor wagons, but something partaking of all three; they have a heavy, lumbering, and uncouth appearance; but their novelty to a stranger renders them objects of much curiosity.

The free mingling of different classes among French people surprises an Englishman. There they are together, high and low, genteel and vulgar, all noise, Babel-like conversation, loud vociferation, and drinking forte bière à la Françoise. The hostler and the boots sit down on the same bench with the host and his guests, and laugh and joke as freely as the rest: the boasted equality of America scarcely surpasses that of France.

Every observer of English manners must be aware, that among the poorer classes there are always popular exclamations more or less objectionable; vulgar and brutal as these may be, none of them have half the withering pathos of the French ejaculation, "Sacré Dieu," which is heard a hundred times a day. It is true that we are not justified in arbitrarily attaching English significations to French forms of speech; but looking at this national and highly offensive phrase in its most favourable point of view, it is worthy of all condemnation.

I slept at Gizors, and in the morning took the road to Chars, making the common inquiry twenty times over, in the course of my walk, "Combien y a t'il d'ici à Paris?" (How far is it to Paris?) This hackneyed phrase I found very useful, not only as furnishing me with amusement by the varied replies it called forth, but also as accustoming my ear to the language in different voices.

BLACK FISH.

We were somewhat interrupted by the appearance of a vast shoal of what the sailors call black fish. Judging by the space which they occupied, there must have been several hundreds. Two boats were sent after them, and soon returned, each with a prize. These were of that species of whale called *Delphinus delphis* The length of the larger was twenty feet, and its girth at the shoulder eleven. The colour of the whole body was black, except a small white spot midway between the shoulders and the tail; the latter was divided into two lobes, forked, lying in the plane of the horizon, and thirty inches from tip to tip. The form sloped both ways, from the shoulders to the head, and also to the tail. The nose was truncated, and remarkably blunt and angular. Two-thirds up the face was the *blow-hole*, through which the animal

breathes. When the skin was removed, this orifice would admit the open hand. The mouth was wide, provided with lips, and the jaws were armed with teeth, sharp, but rather inward, projecting an inch and a half from the gums, an inch in diameter at the root, and two inches asunder. The tongue was the size of that of a full-grown ox; the roof of the mouth hard, rough, and of a dark green. The eyes were larger than those of an ox. Two pectoral fins, hard and strong, about two feet and a half in length, and pointed, bent inwards; these were articulated with the shoulder-blades by the ball-and-socket joint, as the upper part of the arm in the human subject. On the back was a protuberance of solid fat, like a fin, two feet high, diminishing towards the tail. The flesh was black-red; the heart about the bulk of an ox's; the lungs and liver large in proportion. In the stomach were found the remains of various fishes, as the John-dory, (*Zeus auratus*,) a conger-eel, (*Muræna conger*,) and the squind (*Sepia octopodia*) or cuttle-fish, with several of their fine transparent eyes. The weight of the greater of these creatures must have been nearly a ton and a half. The fat was from one to two and a half inches thick, under the forehead, seven inches. The blubber of both yielded ninety gallons of oil, of which the larger furnished two-thirds. The stomachs were preserved and dried to make drum-tops, for which it is said their texture is admirably adapted.—*Bennet and Tyerman.*

A HINDOO CONVERT.

On the 14th of December, a young convert, Gopeenath Nundi, a well-educated Hindoo was baptized, under very affecting circumstances.

The "Calcutta Christian Observer" remarks:—

His baptism had been postponed for a week, in consequence of his being imprisoned by his own family; who have since, by an advertisement in the native newspapers, in the bitterest language, cast him off for ever. Having found means to apprise some of his friends of his situation, his brothers were threatened with an application to the magistrate: from fear of the consequences to themselves, they let him out under a guard, with the promise of returning in the evening. Accordingly, though with a perfect knowledge of their intention again to confine him, and though the promise was extorted from him by force, he returned at the appointed hour, accompanied by some friends who might witness if any violence was used to him. And here, certainly, the scene, as described by an eye-witness, must have been particularly affecting. His brothers and neighbours gathered round him, persuading him to remain: from arguments they proceeded to threats and abuse; from abuse to the offer of bribes, unlimited command of money, perfect freedom of action and thought; nay, not the slightest objection to his belief of Christianity, if he did but stop short of the public profession. Finding all in vain, thay made a strong appeal to his feelings, calling him by the tenderest names, putting him in mind of all that he was giving up, and telling him that he would break the heart of his poor old mother, who had but a few years to live. Just at that moment, his mother, who was probably within hearing, broke out into a howl of agony, which none who heard are likely to forget. The young man himself burst into tears, threw out his arms, and walked hastily away, saying, "I cannot stay!" Though he had made steady and satisfactory progress since he came under Mr. Duff's tuition, we were not prepared for a display of such decision and strength of character in a situation so trying.

Of his baptism it is said—

The ordinance was administered in Mr. Duff's Lecture Room, in the presence of a numerous and most respectable audience, among whom we observed a considerable proportion of natives. After prayer by the Rev. Mr. Mackey, the baboo was questioned by Mr. Duff as to his renunciation of idolatry, his belief in Christianity, his knowledge of its doctrines, and his resolution to follow and abide by them; to all which he made clear and satisfactory answers, rendered impressive by his evident sincerity and the earnestness of his manner. Mr. Duff then administered the ordinance, after a short and solemn prayer; after which he addressed the natives present, earnestly urging on them the reasonableness of Christianity, and the necessity of at least inquiring into its truths; and beseeching them, from the example of some among them, and the imminent danger of delay, to enter on the search at once. It was evident that his words produced a considerable effect on many of them.—*Missionary Reg.*

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See Explanation of Engraving on page 304.

ENGLISH HISTORY.

EDWARD IV.

EDWARD was proclaimed king on March 4, 1461; but it was not a time for coronation festivities, or for the ceremonies which usually attend an accession to the throne. The spirit of murderous ferocity had extended to the nation at large, and the inhabitants of England were eager to imbrue their hands in one another's blood. Awful, indeed, is such a state of affairs! The prophetic declaration is applicable; "Shall I not visit for these things? saith the Lord: and shall not my soul be avenged on such a nation as this?"

Edward saw that no time was to be lost. On the days which followed his accession, he sent his leading supporters in succession towards the northern counties, whither the queen had retired; and on March 12, he set forward with the main body of his army.

The Lancasterian forces were concentrated at York. Early in the morning of the 29th, Clifford, with a body of cavalry, surprised and slew Lord Fitzwalter at Ferry-bridge. Edward, desiring to prevent any panic fear from this disaster, proclaimed leave for all to depart who were unwilling to fight, and promised rewards to such as were faithful. Clifford, while retiring to York, was killed by an arrow which struck his throat as he was loosening his armour, probably shot from a bow drawn at a venture, but it was directed home to this vindictive and sanguinary Lancasterian. The Earl of Warwick stabbed his horse at the head of his troops, and declared he would conquer or die in the field of battle. The two armies marched upon each other. The Yorkists were 50,000, and the Lancasterians 60,000 in number; and this shows that the struggle was now felt to involve the nation at large, while neither party sought to avoid the dreadful shock. It was, indeed, "Multitudes, multitudes in the valley of decision," Joel iii. 14; and the command given in the preceding verse was also in a measure applicable on this occasion; "Put ye in the sickle, for the harvest is ripe: come, get you down; for the press is full, the fats overflow; for their wickedness is great." *Turner* says, "These were the largest armies of Englishmen that had ever yet disputed with each other for a sovereign. It was the eve of Palm-Sunday, the commencement of the most solemn and affecting week of the Christian year; a season that rebuked with silent eloquence the purposes and the spirit of both. But the two hosts were too eager for revenge and victory to moralize." The armies came in sight of each other at nine in the morning, near Towton, a village eight miles to the

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south of York. Some hours were spent in marshalling the hosts, during which they shouted defiance to each other. At four in the afternoon the combat began; and three hours after, when the evening shades came on, each side maintained its ground. "The faint twilight disappeared, and darkness followed, yet both were still fighting, and too furious to leave off. In vain resting nature summoned them to pause. They continued as far as they could the dismal struggle all night, disturbing its awful repose with the groans of dying misery; the fierce clashing of arms at times enlightening the gloom by the sparks struck out in their collision. What light could be obtained from fires and torches in some important stations, was supplied. This midnight combat produced much disorder in both armies, but gave advantage to neither. The cheerful dawn appeared, but only to reanimate them to pursue the demon work of rage and death. The sun again rose, and proceeded onward to his noon, and yet the dreadful battle continued with lavish, but still with indecisive slaughter."

Both armies were nearly exhausted, but neither had given way. At this critical moment, the Duke of Norfolk, the hereditary opponent of the house of Lancaster, arrived, with an additional force, and then the battle was decided in favour of Edward. The ground was covered with snow; but the white robe of nature was crimsoned with human gore. Upon this field were laid from 30,000 to 40,000 human corpses; nor was it a common field of battle: sons had there perished by the hands of their fathers, and fathers by the hands of their sons; masters, servants, relatives, lords, and dependants, had all been engaged against each other in this work of butchery, and Satan must have greatly rejoiced at this uncommon scene of crime and carnage! The husbandman, as he breaks the soil of this field of diabolical slaughter, still frequently turns up some remains of the horrid implements then used, or the mouldering bones of those who fell on that occasion.

Turner remarks, "The human heart revolts from this mass of blood and death: and as wars are evils of our own and not of nature's production, we may blush or tremble in contemplating these works of our self-will; that the Divine image within us should, for vile passions and sordid interests, thus defile its sublime nature, and defy the laws and wishes of its mighty and benign Original. It is inconsistent for man to complain of the evils of this life, and yet to sanction, panegyrise, or practise warfare, the most extensive of those human miseries with which mankind have deliberately afflicted themselves." But we may go further, and point to the blood-stained field of Towton, as showing how the human heart is deceitful above all things, and desperately wicked. Many a one who then imbrued his hand in the blood of a parent or relative, would perhaps a few days or weeks before have exclaimed, like Hazael of old, "Is thy servant a dog, that he should do this great thing?"

Many of the haughty and ferocious nobles of that period fell in the battle of Towton; among them were the Earls of Northumberland and Westmoreland, and several barons. Henry and his queen fled to Berwick, and afterwards found an asylum in Scotland. The Earls of Devon and Wilts, with other nobles, were murdered after the battle, at York, which city Edward entered immediately, and took down the heads of his father and Salisbury from the Micklegate-bar. After subduing the northern counties, Edward returned towards London, and on June 29 he was crowned. So jealous was he of his new dignity as to resent even a jocular remark which might appear to reflect upon it: a grocer named Walker, having lightly declared he would make his son heir to "the Crown," the sign by which his shop was distinguished, paid for his jest with his life, being condemned and executed for treason!

In November, the Parliament met. The nobility of the land were now so nearly exterminated by battle, the scaffold, banishment, or attainder, that only one duke, four earls, one viscount, and twenty-nine barons were summoned, and only sixteen seem to have been present. But nineteen prelates and mitred abbots attended, and they might have considered the empty seats of the lay nobility as the result, in many respects, of the doctrines of falsehood and error they had so long taught. Yet even these acts of slaughter were over-ruled for good, though no excuse is thereby afforded to the perpetrators. The feudal nobility, who had so long oppressed the commons of the land, were now for the most part extinct, or too much weakened to retain the iron rule they had so long enforced;

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and Edward, ascending the throne by the national voice, though entitled thereto by hereditary succession, found it necessary to obtain the public favour by several beneficial enactments, which especially promoted the welfare of the middle classes. One statute, which forbade the numerous bands of lawless retainers hitherto engaged by the nobility, did much for the good of the lower classes, by directing them to more peaceable occupations than that of waiting in dependence and wretchedness on the beck of a feudal despot, to execute his unlawful biddings.

The restless queen did not allow the land to remain quiet. She visited France in the following spring, and in October she landed near Newcastle, with a band of foreign adventurers; but the country did not respond to her call. The king and Warwick advanced to meet her; she re-embarked, and was shipwrecked; some of her followers were cast ashore, and destroyed, but she escaped; and, after committing some acts of hostility, with the aid of a Scottish force, returned to France. Her cause now seemed so hopeless, that Somerset made terms with Edward, and joined him against the queen.

The interval of rest was but short. In 1464, there were commotions in many parts of England, in which the clergy were active; probably, like Demetrius of old, they had found that their craft was endangered by the principles which threatened their power and temporal possessions, and which the king and the Yorkist nobles eagerly listened to. They had forsaken the cause of Lancaster, when it became too weak to gratify their unholy desires; but they found the house of York disposed to limit their influence, and the threatened danger induced them once more to patronize the family of Bolingbroke.

The queen landed; after joining Henry, she led an invading army from the north, and was joined by Somerset and many of her English adherents. A battle was fought on Hedgely-moor on April 25, 1464, unfavourable to the Lancasterians; and Montague, the brother of Warwick, wholly defeated them on May 8, at Hexham, after a short but hard-fought struggle. Somerset was taken, and beheaded; other nobles also perished on the scaffold. Henry VI. was some time afterwards seized at Waddington-hall, in Lancashire, where he had concealed himself. He was led to London, and carried in triumph to the Tower, his legs bound to his horse's stirrups. Queen Margaret and her nobles fled again to the continent. *Comines* has recorded, that he saw the Duke of Exeter in Flanders, barefoot and bare-legged, begging his bread from door to door. The proud nobles of England, like those of Judah of old, might be thus described: "Therefore my people are gone into captivity, because they have no knowledge: and their honourable men are famished." Many of lower rank were raised by Edward to occupy their places; for, though merciless to the leaders amongst his enemies, he proclaimed a general amnesty to all who would submit; and this gave him a hold upon the hearts of the people at large.

Other rapid changes were at hand. Edward was disposed to listen to the dictates of his passions, rather than to the common maxims of prudence and worldly wisdom. A few days before the battle of Hexham, he privately married Lady Elizabeth Grey, the daughter of Jacquette, of Luxembourg, by her second husband, Lord Rivers, the widow of Sir John Grey, who fell as a Lancasterian at the second battle of St. Albans. The king sought her favour on dishonourable terms, but she refused to listen to them, and he privately made her his wife. The union was not avowed till the autumn; in the following spring she was crowned queen. This highly displeased Warwick, who had been engaged in considering the expediency of various foreign matrimonial alliances for Edward. The old aristocracy, though reduced in number, were still disposed to maintain their power, and the more so as the youthful monarch owed his elevation to their assistance, and had increased their influence by his grants. But their heavy yoke was galling to Edward: instigated possibly by his new queen, he ventured to displace a few of the nobles from their offices, to appoint some of her newly-ennobled relatives in their stead, and to marry several young females whom the late wars had rendered heiresses, to his own immediate partisans and connexions. This disgusted Warwick and many of the ancient nobility, who were anxious to increase and strengthen their power. The king was also displeased with his brother Clarence for having married the eldest daughter of Warwick. All these proceedings, combined with several other causes for discontent, rendered the king-

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making earl as ready to pull down Edward as he had been to set him up. The sudden change of feeling manifested by the nobility was in reality treachery; yet we cannot but conclude that the Romish system of religion increased the prevalence of these crimes, by their excuses and absolutions, which lulled the remorse of conscience, and expiated every shade of crime by the performance of certain conditions.

In the year 1468, the chancellor declared to the parliament the king's intention to enter into a war with France. Edward seems to have thought that he could, like Henry v., confirm his own position by engaging unquiet minds in foreign warfare; but the English aristocracy were not to be thus diverted; and Louis xi., the King of France, took wise measures to prevent the invasion of his kingdom.

About the middle of 1469, a tumultuary insurrection broke out in the northern counties. The manifesto set forth by the rebels, implied that their proceedings were directed by their leaders against the newly-created nobility, and that the ecclesiastics felt their possessions in danger. It was rather an effort to limit the proceedings of Edward, than an attempt for the advantage of the house of Lancaster. Edward hastened to meet the main body of the insurgents; but Pembroke, on his march to join the king, was intercepted by another force at Hedgcote, near Banbury. The Yorkists were defeated, principally because a dispute among themselves weakened their force. The father and brother of the new queen, with several other nobles, were put to death. The insurgents met with no further opposition, and Warwick gained possession of King Edward. A reconciliation was effected; but Warwick felt that his only chance of ultimate safety was to take up heartily the cause of Henry; and this state of repose was of short duration. It was purchased by complying with the demands of the Nevills; but Edward saved himself from again being held as a prisoner, by withdrawing from the residence of the archbishop. On receiving an intimation that armed men were in readiness to seize him after supper, he made an excuse to withdraw, and mounting a horse, rode off to Windsor. The parties were again outwardly reconciled by the mediation of the Duchess of York, who was mother to Edward, and the aunt of Warwick.

Another insurrection broke out in March. Edward hastened to meet the rebels, and defeated them in Rutlandshire. Warwick took arms; his intentions were not clear, but Clarence and himself were shortly after denounced as traitors, and fled to France. Here the king-maker negotiated with Queen Margaret. With much reluctance she consented to enter into a treaty with the earl, agreeing that Prince Edward, her son, should marry the second daughter of the earl, when Warwick had recovered the kingdom for Henry. We cannot enter minutely into the events that followed. Edward was a careless, dissolute prince, fond of dress, festivity, and amusement. Confident in his own power and ability, he took no precautions to intercept an expedition which Warwick fitted out, though informed as to its object and destination; while his love of pleasure increased his unpopularity.

Lord Fitzhugh began a rebellion in the north. Edward hastened to meet a retiring enemy, but he would have fallen into the power of another band, if he had not been timely warned by a minstrel and a priest. Meanwhile, Warwick landed, and issued a proclamation, declaring Henry vi. to be the only rightful king, and summoning the nation to rise in his behalf. Edward was at Doncaster, collecting his forces, when, while sitting at dinner, he was warned that treachery prevailed in his army, and that the Marquis Montague, formerly the Earl of Northumberland, was addressing the troops in favour of Henry. He found it necessary to flee instantly with a few attendants to Lynn, where they embarked in three ships then in port, and steered for Holland. Pursued by some Easterling vessels, he escaped captivity only by running his vessel on shore, and by the timely interposition of the ruler of the district. Thus in eleven days after the landing of the king-making earl, Edward was a destitute fugitive, unable even to pay his passage but by leaving a furred robe as a pledge for future recompence!

But Warwick felt that this change was likely to have a violent re-action, and to produce the very opposite effect to that which he desired. He eagerly pressed the arrival of Margaret and her son, and took care to prepare for the arrival of

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Edward, which was expected by his adherents; but he was in many respects limited till the queen should arrive. Henry, though released and proclaimed king, was evidently a mere puppet in the hands of the prevailing party; and the principal performer, Queen Margaret, was absent. She was detained on the coast of France from the months of November to April by impassable winds. Meanwhile, Clarence resolved again to support his brother Edward, and in March, 1471, he embarked from Walcheren with two thousand followers, raised chiefly by the assistance of the Duke of Burgundy. They approached the coast of Norfolk, but found Warwick had raised forces to meet them. After being tempest-tossed for some days, Edward landed at Ravenspur in the Humber, while his brother Gloucester and others got on shore where they could.

The country was armed, and not disposed to countenance Edward; but he issued a proclamation, stating that he would be content with his paternal title, and pressed forward to York. On giving assurances that he would not disturb Henry's possession of the throne, he was allowed to refresh his followers, and move forward to Tadcaster. From thence he proceeded to Nottingham, his movements being too rapid to allow the Lancasterians to intercept his progress. The Londoners knew nothing of his landing till ten days after his arrival, when he was in the heart of the country.

The impunity with which Edward had been allowed to press forward, increased the number of those who resorted to him. The best troops of Warwick were near, and he endeavoured to engage the earl before the Lancasterian forces could be concentrated. Warwick took shelter in the city of Coventry. This confession of weakness induced others to join Edward; and he challenged the earl to personal combat. Clarence now joined Edward, and they offered terms to Warwick; but he knew that he had gone too far to be again trusted.

Edward then marched towards London, and entered it without a struggle on April 11. In twenty-eight days after his landing in Yorkshire, he had sent Henry back to the Tower. Archbishop Nevill offered no effectual resistance to his return; but his situation was an anxious one. Somerset and some others were raising troops in the western country, expecting Margaret and her son, who had embarked at Harfleur, while Warwick with his forces approached London from the north. A loan from the agents of the Florentine merchant princes, the Medici, enabled Edward to satisfy his troops, without alienating the Londoners from him by plunder or extortion; he avoided Margaret's error after the second battle of St. Alban's. Thus supplied, Edward left the metropolis on April 13, Easter-eve, carrying Henry with him. Meeting the advanced guard of Warwick near Barnet, he drove them through that town, and lodged his army beyond it, close to the Lancasterian forces; but mistaking their position, left the right wing of Warwick's forces without any opposed to it; so that a cannonade they kept up the whole night produced no effect. In the morning a thick mist partially concealed the armies from the view of each other; but Edward hastened to begin the conflict. It was Easter-day; but no considerations relative to the season hindered these falsely-called Christians from their ambitious contest. At first the Lancasterians were successful; but from the similarity of the badge of Oxford's men, a star with rays, to one of the Yorkists, which was a sun, they mistook friends for foes; and this, with the too eager pursuit of the Lancasterians, turned the advantage in favour of Edward; and after a furious battle of three hours, his opponents fled. The action was over before nine o'clock in the morning. Warwick and Montague were among the slain; and not less than 9000 human victims were sacrificed on that day to the pride and passion of their leaders.

The death of the ambitious Warwick calls for a few remarks. Like the Assyrian of old, he had been the unconscious rod of God's anger; but he took upon himself to act beyond his commission, and to endeavour to set up that which he had been employed to pull down. This reminds us of that Assyrian who is described as saying, "By the strength of my hand I have done it, and by my wisdom; for I am prudent: and I have removed the bounds of the people, and have robbed their treasures; and I have put down the inhabitants like a valiant man.—Shall the axe boast itself against him that heweth therewith? or shall the saw magnify itself against him that

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shaketh it? as if the rod should shake itself against them that lift it up, or as if the staff should lift up itself, as if it were no wood," Isa. x. 13. 15. The time soon came when the work of the Lord was performed; then the stout heart of this leader was punished, and the glory of his high looks brought down.

If we regard this affair merely as a matter of history, we may say that it was well for England that Warwick perished. His conduct had committed him with both parties, and he could no longer remain a subject to either, while his life must have kept the land in a state of civil warfare. As a general, he had never shown ability; while by his ambition and treachery, he had forfeited that popular influence, which caused him to be spoken of as being in such favour and estimation among the common people, that they judged him able to do all things, and that without him nothing was well done. Such was the character of Warwick.

The removal of this nobleman altered the position of both parties. He had lately divided the partisans of the house of York; but his death threw them together again. This was unfavourable to the Lancasterians; but they also lost one who had been their most deadly opponent. Letters written about this time show that they did not yet despair, and that the Yorkists were far from considering the matter decided in their favour. It was soon known that Margaret had landed in Weymouth on the same day the battle of Barnet was fought, and that she was joined by a large and increasing force. At first she desponded; but her leaders assured her that she was not weakened by the death of Warwick.

Edward saw that not a moment was to be lost. The late rapid changes rendered most persons possessed of property and influence desirous rather to keep aloof, than to attach themselves to either party. Each side tried to prevent the schemes of the other from taking effect. The Lancasterians pushed again towards the north, but were overtaken at Tewksbury on May 3, by Edward, who carefully guarded against their proceeding either northward or toward London. Both armies were fatigued by a long march, but prepared for battle the next morning. Early in the action, Somerset, displeased with one of his ablest commanders, Lord Wenlock, clave his head with an axe. This occasioned disorder, which Somerset was too confused to remedy. The Lancasterian troops were broken, and fled; their young prince was taken and slain; and the victory of the Yorkists was complete.

Through the interposition of a priest, and the influence of joy and thankfulness, Edward proclaimed a pardon for the prisoners and fugitives, but in a few days he recalled it. The Duke of Somerset, the prior of St. John, and others were beheaded. Margaret was taken prisoner; and on hearing the event of the battle of Tewksbury, her adherents, who were residing in several parts of the country, dispersed themselves. Only one party took any active course. Falconbridge, a Nevill, and a partisan of Warwick, raised forces in Kent, and attacked London on May 15; but he was repulsed, after destroying part of the suburbs. The news of his approach induced King Edward to return; he pursued Falconbridge into Kent, where the latter surrendered; and Edward, in a few short weeks, found himself again master of all England. The peculiar circumstances which defeated the well-concerted plans and arrangements of the Lancasterians, especially the opposition of the elements which prevented the junction of their leaders, may remind us of that expression in Holy Writ, "They fought from heaven, the stars in their courses fought against Sisera;" but it should especially remind us that the devices of men are brought to nought by "Him that sitteth upon the circle of the earth, before whom the inhabitants are as grasshoppers."

On May 22, Henry VI. died in the Tower. The Duke of Gloucester, King Edward's brother, has been charged with his murder; but the imputation appears satisfactorily refuted by a calm inquiry into the circumstances, which show that the death of Henry is to be ascribed to the natural effects of the late harassing and distressing events, upon a body and mind long since enfeebled by diseases both mental and corporeal. He cannot be considered an usurper; and he is said thus to have defended himself when accused of that crime in the Tower, "My father and grandfather were kings of England; I was enthroned when I was an infant, crowned when I was a child, received the voluntary homage of all my subjects, and enjoyed the royal authority unchallenged almost forty years." As-

suredly this unfortunate prince would have felt more happy as an ecclesiastic than as a king; and the church of Rome rewarded his superstitious attachment, by giving currency to reports of miracles wrought by him. He would doubtless have been ranked as a martyr, had any advantages been likely to accrue to the popedom.

Edward was now firmly seated on the throne, and he weakened his opponents by confiscations and attainders. One instance will suffice. He pardoned Nevill, the Archbishop of York, and some time after engaged to visit that prelate at More, in Hertfordshire. The archbishop prepared to entertain the king with magnificence, even borrowing plate largely for the occasion. But the day before that appointed for the visit, the king sent a party, who seized all the valuables thus collected, and led the archbishop as a prisoner to Guisnes, where he was treated with harshness till removed by death. The reputed head of the Lancasterian party now was Henry Earl of Richmond, son of Edmund Tudor and Margaret Beaufort, grandson of Owen Tudor. He had been taken at sea while escaping to France, and had come into the power of the Duke of Bretagne, who refused to give him up to the king of England, but consented to retain him a prisoner, upon condition of being paid a sum of money annually.

In the following year, the great contest which had so long and so deeply agitated England appeared to be at an end; but the lawless, disbanded followers of the nobles committed acts of rapine and violence, which strong legal proceedings were required to repress; also dissensions broke out in the court of Edward. The earliest was between Clarence and Gloucester. The former had married Isabella, the eldest of the two daughters and heiresses of "the king-making Warwick." He wished to appropriate the whole inheritance, and concealed Anne, the younger sister, in the disguise of a cook-maid. Gloucester, however, found her out, and married her. The brothers then quarrelled about the inheritance; but were reconciled by Edward, who gave Clarence the largest share.

In 1474, Edward again projected an invasion of France; he found several allies and supporters on the continent, as Louis XI. was much detested. This monarch was very prudent and crafty: by large bribes and ready concessions, he broke the designs of Edward, and, in fact, purchased a peace. His crooked and deceitful arts are not to be praised; but certainly it was wiser to pay the counsellors of his rival to persuade their master to peace, than to expend still larger sums in paying men to fight, and thus bring down sufferings upon his innocent subjects. We may mention one praiseworthy act on the part of each of the kings. Louis stipulated for the liberation of Queen Margaret, and Edward required Louis to leave the Duke of Bretagne unmolested.

Edward now abandoned himself to sensuality; we find that he soon became systematically cruel. We need not enter into the details of his licentious conduct. His cold-blooded cruelty was manifested towards his brother Clarence; it was perhaps stimulated by ambition, as that duke having become a widower, sought to unite himself to the heiress of Burgundy. Two of Clarence's followers had been condemned upon frivolous charges of necromancy and treason. Clarence expressed his displeasure; upon which the king accused him in parliament. Early in 1478 he was condemned on unjust pretences, and privately executed in the Tower. According to common report, he was drowned in a butt of wine. The king, when it was too late, felt the horrors of fratricide; when the nobles would sometimes plead for the pardon of some retainer condemned to suffer for his crimes, Edward would recal the death of Clarence, and exclaim, "Oh, unhappy brother, no one would speak for you!" It is probable that both the queen and Gloucester had promoted the death of Clarence."

The instability of worldly projects was further shown by another act of parliament passed about this time. The Duke of Bedford was deprived of his title on the plea that he was too poor to support it with respectability. This was probably an evasive declaration, a mere excuse for humbling the individual; but it furnishes an instructive lesson, when we remember that, only nine years before, the same monarch had conferred this very title, intending to qualify the possessor for becoming the husband of the Princess Elizabeth, then heiress to the crown; and this young duke, the son of the Marquis of Montague, was then the presumptive heir, not only to his father's title and possessions, but also to those of his uncle Warwick, and the wealth of

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Archbishop Nevill. But riches truly "make to themselves wings, and fly away." His aunt, the sister of Warwick, earned her living by needlework.

Nearly the whole of the ancient nobility had been slaughtered during the civil war: Edward sought to replace them by bestowing titles and riches on the queen's relatives; but other nobles soon arose, as haughty and aspiring as the Warwicks and Somersets. Among these were Buckingham, Hastings, and Stanley, who hated the queen's family, though the authority of Edward prevented any open collision between the parties.

In 1479, a destructive pestilence ravaged the land. An old chronicler says, that in four months there perished more than thrice the number of those who had perished in fifteen years of civil warfare. Probably more than had died in the field, but the numbers actually slain in the most destructive battle, form but a small part of those who perish by the direct results of warfare.

In 1482, there were hostilities with Scotland, in which the English, under the Duke of Gloucester, were successful. But Edward found himself disappointed by Louis, who refused to continue the annual pension he had agreed to pay, and declined the alliance of his son with an English princess. Enraged at these refusals, Edward prepared for an invasion of France; but he was no longer the active, vigorous warrior. Though he was in the prime of life, his sensual indulgences had rendered his body corpulent and diseased, and a sudden attack of illness after the excesses of a feast in Easter, 1483, called him to appear before the great Judge of all men, at the age of forty-one. His character is too strongly marked to be mistaken; and he may be branded as a vindictive, cruel, ambitious, sensual, debauched man. Even his natural courtesy and good temper, with his prompt decision of character, added force to his vices. He must be ranked amongst the most odious of the English monarchs. His inclination for dissolute pleasures rendered him willingly subservient to the Romish clergy; he sought refuge for an accusing conscience in the deceptions of superstition; and a monk vouches for his piety. Yet he knew what was right, though he chose to pursue what was wrong: only six weeks before his death, he gave many directions to Lord Rivers, then appointed governor to the young Prince of Wales, which exhibit a respect for moral worth, with a desire to promote virtuous conduct in his son. How often do the willing captives of Satan thus show that they feel the extent of their thraldom!

The lawless state of affairs during this period, appears from the fact, that this was the first reign since the regular establishment of parliament, in which no laws were passed for the removal of oppressions, and no petitions offered for the redress of grievances. Woe unto the land where the voice of the poor is unheeded! but if neglected of man, the Lord will maintain the cause of the afflicted.

During the latter years of Edward IV., there was a considerable improvement in the general state of the country, by the transition from a state of anarchy and warfare, to a comparative state of peace, though, as already stated, matters were very unsettled. The character and habits of Edward, bad and evil as they were in many respects, rendered him an encourager of literature, and thus he was induced to patronize the introduction of that most important discovery—the art of printing, into his dominions. The Earl Rivers, the queen's brother, deeply interested himself in this matter; the engraving prefixed to this article is copied from a drawing in an old book which represents Lord Rivers introducing Caxton, the first English printer, to the king, with an early specimen of his press. The time when this noble art would be wanted to strike an effectual blow at superstition and ignorance, was now at hand. The disciples of Wickliff had continued to increase, and to disseminate the doctrines of truth, sheltered, as it were, and protected by the very storm of civil warfare which raged around them; but the slow progress of copying by the pen retarded the circulation of the writings of the early reformers. The luxurious Edward, and his literary relative, were unconscious instruments in advancing an art which soon proved to be most powerful in disseminating the glad tidings of salvation, which they despised, or would have gladly aided to crush. The delineation is interesting, as it also contains figures representing the queen, the young prince, afterwards Edward V., and the Duke of Gloucester, afterwards Richard III.

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AUGUST FLOWERS AND PLANTS.

Plants in Flower.

WILD.

Water-lily, *Nymphæa alba*
Yellow succory, *Picris heracioides*
Yellow loosestrife, *Lysimachia vulgaris*
Carline thistle, *Carlina vulgaris*
Burdock, *Arctium Lappa*
Fell wort, *Gentiana amarella*
Mugwort, *Artemisia vulgaris*
Meadow saffron, *Colchicum autumnale*
Devil's bit, *Scabiosa succisa*
Milk thistle, *Carduus Marianus*
Soapwort, *Saponaria officinalis*
Eye bright, *Euphrasia officinalis*
Hop, *Humulus lupulus*
Dodder, *Cuscuta Europæa*
Lesser centaury, *Erythræa Centaurium*
Corn spurrey, *Spergula arvensis*
Sun-dew, *Drosera rotundifolia*
Marsh cinquefoil, *Comarum palustre*
Enchanter's nightshade, *Circæa lutetiana*
Hemlock, *Conium maculatum*
Tufted vetch, *Vicia cracca.*

CULTIVATED.

Two-coloured Fair-eye, *Calliopsis bicolor*
Sweet Sultan, *Centaurea moschata*
Golden rod, *Solidago odora*
Tansy, *Tanacetum vulgare*
Purple thorn apple, *Datura Metel*
American groundsel, *Senecio elegans*
Pyramidal monkshood, *Aconitum pyramidale*
Siberian wall-flower, *Cheiranthus rostratus*
Grove starwort, *Aster nemoralis*
Marvel of Peru, *Mirabilis jalapa*
Lady's Traces, *Spiranthes autumnalis*
Yellow gentian, *Gentiana lutea*
Chinese starwort, *Aster Sinensis*
Dahlias, *Dahlia pinnata, etc.*
Winter cherry, *Physalis Alkekengi*
Shining marygold, *Tagetes lucida*
Turnsole, *Heliotropium Europæum*
Blue passion flower, *Passiflora cœrulæa*
Culathian gentian, *Gentiana Pneumonanthe*
Lady's slipper, *Calceolaria rugosa, etc.*

The floral beauties of the fields and gardens now rapidly vary in character from the increasing warmth of the weather. The fresh clear green of the leaves fades off, first into a dull, dingy colour, and at length, by degrees, passes into yellow of almost every shade. But the change which now attracts the chief attention of the botanist, is the formation and ripening of seeds and fruits, promoted by the greater heat of the sun, as is elegantly described by a modern poet:—

Autumn! and the red sun, through mottled clouds,
Like fire-bark through blue waves, his passage cleaves;
In ripening raiment all the orchard shrouds,
And gilds with glory all the saffron sheaves.
The wind, swift handmaid of the harvest field,
Curling the yellow tresses of the corn,
Brings, on the breaking silence of the morn,
The reapers' song. Lo! where they wildly wield
Their glittering sickles, brandish'd high in air,
Ere they begin their merry toil! and now
The shout is hushed into a murmur low:
The sun advancing from his cloud-girt lair,
Chases from sorest hearts sad dreams of night,
For darkest waters will reflect his light.

R. C. Campbell.

The progress of the seed from the fecundation of the seed-organ (*ovarium*) to full maturity has recently been investigated, with great care and skill, by several distinguished men of science on the Continent; particularly Adolphe Brogniart and Biot: the first a young botanist of extraordinary promise, and the second —not a botanist, but an astronomer, who has taken advantage in his experiments of certain discoveries, with respect to light, that could at first never have been dreamed of as thus applicable. So infinitely varied, so closely linked in unison, and so harmoniously combined, are all the laws and processes by which Divine Providence regulates the creation, all working together for the good of the creatures, and chiefly of man; sinful and fallen man, who is too often thankless for all the bounties showered upon him by the beneficence of his great Creator.

When the fecundating dust, or farina, (*pollen*) contained in the anther of a flower (see "Visitor," for February, page 52,) escapes from the chamber of the anther, where it has been previously confined, it consists of grains or granules, in most plants of a yellow golden colour. One of these grains is composed of several other smaller ones, and

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when it falls on the summit of the pistil, which is usually moist, the moisture causes it to burst, and the component granules to separate. Besides this, every granule so moistened, sends out a long, pointed projection, which penetrates into the pores of the summit, and when magnified is represented by M. Adolphe Brogniart, in the form of a small pin stuck into a cushion. It ultimately, as he is of opinion, reaches the nascent seeds in the seed-organ, which, from that time, begin to increase in size till, if the plant is healthy, they arrive at maturity.

It is worthy of remark, that notwithstanding the very great variety of genera and species amongst plants, the size and shape of the granules are no less varied, while they are adapted, in their own kinds, to the pores in the summit, and the minute passages which run thence to the seed vessel: this appears to be designed by an all-wise Providence, to prevent the intermixture of species by inter-crossing; and it is only by the persevering efforts of art, that so many crosses are effected by gardeners in flowers, fruits, and vegetables, which have of late years become so extensive, that not only hundreds, but even thousands of crossed sorts have been produced. In roses alone, for example, there are nearly three thousand crossed sorts, and nearly as many of heart's-ease and dahlias.

The experiments of M. Biot, above alluded to, were conducted on the principle discovered by him, that certain substances, such as starch, polarize the rays of light towards the right hand, while sugar, on the other hand, polarizes the rays of light towards the left hand. By this means, he was enabled to detect the constituents of the various parts of plants, by merely polarizing the rays of light from them, without the aid of chemical analysis. He found, by this means, that when corn is ripening, the sugar contained in the stem and leaves disappears gradually from the root upwards, and in proportion as it disappears, is partially converted into starch, particularly in the ear of the corn. He has consequently been able to render a profound scientific reason for the practice of farmers, in cutting their corn before it is quite ripe; for the sugar previously contained in it is converted into starch after it is cut, nearly as well as if it had not been cut, while it is not so apt to be scattered about by the shaking of the ears in harvesting.

Among the wild flowers, which may now be met with by the botanist, the white water lily, *Nymphæa alba*, is a very conspicuous, and by no means a rare ornament of ponds and lakes. It has even been seen growing in ditches, in the south of Ireland, near Youghal; and occasionally in the pool of a slow running river, whose

"banks
Need no embellishment of dew-fed flowers;
For weeds, almost as beautiful as they,
And, in the embalmed stillness of this hour,
Seeming to be endued with odorous breath,
Over the gliding stream hang motionless;
And the fair water-lily's broad green leaves
Are undulating there in fairy troops.

Methinks, how very beautiful, beneath
Yon willow tree, (sole melancholy thing
Where all is cheerful) an unmated swan
Would look, or stationary riding there,
The queen elf's silvery bark; or, with bent neck,
And plumy wings uplifted, through the waves
Furrowing her graceful way." HOUSMAN.

The white water-lily, however, is not so common in some places, particularly about London, as the yellow one, *Nuphar lutea*, which is considerably smaller, and not so conspicuous as the white one. The yellow one is also more common in running water than the white one, as in the Ravensburn, between Deptford and Lewisham.

The meadow saffron, *Colchicum autumnale*, does not belong to the same genus as the common saffron, *Crocus sativus*, though the flower closely resembles it. In districts where it abounds, as in some parts of Suffolk, it renders the meadows very gay at this season, with its light purple flowers. Whole acres of meadow-ground are thus ornamented in Germany and Switzerland. The leaves come out in the spring, and the flowers in the autumn, whereas in the common crocus, the flowers come out before the leaves grow to any length. The meadow saffron furnishes a very powerful remedy for gout and rheumatism; the basis, indeed, of all the patent and other advertised medicines for these complaints. It is very dangerous, however, to tamper with, as an over-dose is poisonous. Chemists have very recently discovered a peculiar alkali in this plant, which is named *Colchicia*, very different from veratria, to which it was previously supposed to owe its power as a medicine.

Hemlock, *Conium maculatum*, is another plant now in flower, which is employed in medicine, but has been long known as a strong poison. As several

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umbelliferous plants, such as chervil, *Chærophyllum sylvestre*, are commonly mistaken for hemlock, we shall more particularly detail the characters of the latter. Hemlock grows on ditch-banks, heaps of rubbish, and uncultivated places, but is very local. It grows, for instance, on the north side of London, as in Copenhagen fields, but not on the south side. It is a tall plant, from three to four feet high, when in a situation suitable to its growth, and is easily distinguished from similar plants, by reddish brown spots and streaks on the pale green stalk. The leaves are large, abundant, of a dark shining green, triply winged, not very unlike the carrot, or uncurled parsley, with the ultimate divisions bluntly indented. The flowers are in large umbels of a white colour, with numerous spreading rays. They are all fertile, irregular without, regular within, and the petals heart-shaped. The fruit is almost spherical, marked with fine notched ridges, and smoothly streaked. It is rarely prescribed internally, but is useful in external applications in allaying pain.

Sun-dew, *Drosera rotundifolia*, is an inconspicuous, but interesting little native plant, not uncommon in damp, peaty soils. In the neighbourhood of London, it may be found on Hayes Common. The leaves are small, brown, and spoon-shaped, lying on the ground somewhat in the form of a star. Their upper surface is studded with small glutinous glands, like minute dew-drops, whence the name. In these, flies are not uncommonly found entangled, though the leaves do not shut up on them like the American plant, called Venus's Fly-trap, *Dionæa muciplula*.

There is another species of sun-dew, with larger leaves, *Drosera longifolia*, more common in some localities, such as on the north-west shore of the Isle of Bute, than the preceding. Both the species are shy of expanding their flowers, which appear, for that reason, to be nearly always in bud, and then hang in a graceful drooping position.

In the gardens, one of the prettiest flowers is the Marvel of Peru, (*Mirabilis jalapa*,) so called from the singular circumstance of its bearing, on the same root, flowers of very different colours, some being wholly bright crimson, others yellowish buff, and others partly crimson and partly buff, in clouds, blotches, or streaks, varying endlessly from no assignable cause but the original constitution of the plant. This, however, is not so very marvellous as to have required a name to mark it; for instances occur of a similar kind in many other plants. In the common ten weeks' stock, (*Matthiola annua*,) for example, it is not uncommon to see some flowers on the same plant scarlet, and others clouded and streaked with white—sometimes even nearly pure white, without streaks. In the garden heart's-ease, the varieties are often much greater. The writer has now a plant which sometimes produces flowers nearly pure white, and others blue, of endless shades. There are three species of the Marvel of Peru, but only the common one varies in the colours of the flowers. The long flowered *M. longiflora*, which has long trumpet-shaped white flowers, is chiefly admired for the fine odour which these exhale as the sun declines; for they generally remain closely shut till the evening, except in very cloudy weather. In hot weather, the common Marvel of Peru also keeps its flowers in the daytime, only opening them in the evening, or when the weather is cool and cloudy. In the West Indies, the other species, *M. dichotoma*, is for this reason called the four-o'clock-flower. The term *Jalapa* was given to the common sort, from an opinion that it furnished the drug jalap; but this has been found to be a mistake, the jalap being furnished by the *Ipomœa jalapa*, also a native of America.

The common turnsole, *Heliotropium Europœum*, is so called from the flowers having a tendency, more or less, to turn towards the sun, a circumstance which, in the case of the common sun-flower, *Helianthemum annuum*, is greatly exaggerated in popular belief beyond the actual facts. The common turnsole has egg-oblong, wrinkled leaves, the flowers white, in spikes, which are single on the lower and double on the upper parts of the plant. It furnishes the litmus, so important to chemists as a test of acids.

The China aster, or Chinese starwort, *Aster Sinensis*, is a great favourite in gardens at this season, on account of the diversity exhibited in the colours and markings of the flowers. The German florists have lately improved so much on the old China asters, that they are in some danger of losing the name altogether, it having become usual now to call them German asters. The seed is imported from Germany in

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considerable quantities, in order to obtain therefrom the true German sorts, though the writer has found that these flowers come sufficiently true of their kind from seed which he has saved in his own garden—the seed of which flowers, however, came direct from Germany. In the same way, ten-week stocks have been improved in size and colour by the German florists, and seed has in consequence been imported from Hamburgh to this country. The Dutch were in former times the leading florists in the world; but the English are now in many things superior to them; and the Germans, as appears from the two facts just mentioned, are also making great advances. The French surpass us, as yet, in roses; but even in this fine flower, we have English florists little behind the best in Paris or Rouen. J. R.

THE LAW OF KINDNESS.

I AM no lawyer. I do not even fully understand the laws of my own country. It is true I have some knowledge of the criminal code, and very much admire that part of it which provides for trial by jury; but of the common law, with all its technicalities, ramifications, and "glorious uncertainties," I know scarcely anything. I leave it to the gentlemen of the profession. The doctrine that I wish at present to establish is this, That in the common occurrences and transactions of life, the law of kindness is the best. Revenge may be sweet to the depraved human heart, but vengeance belongeth unto God; it is not the prerogative of man, nor is it so powerful as the law of kindness. I speak from experience: it was once, at least, put in force against me, and I felt its mighty influence. If I may be allowed, I will lay before the readers of the "Visitor" the case and process, and then they can judge for themselves.

When I was a boy, I lived with my uncle, whose residence was in a Yorkshire vale, and on the western bank of a beautiful serpentine trout stream. I was a good deal employed in agricultural pursuits; but when I had a little time to spare, I was sent to a school, which was situated on the summit of the eastern side of the valley, and at the distance of about two miles. The reader may imagine my pathway to the house of learning. It was, indeed, very delightful, on a fine spring morning, to walk for half-a-mile by the side of the river, and then cross it by the stepping-stones which were laid for the purpose; then go over a few level corn-fields, and then climb the opposite brow; till I came to the sterile moorland. My eye caught all the different shades, from the light green corn, to the dark brown heath; and I heard all the varied notes of the feathered tribes, from the thrush to the pewit.

In my way to school, I had to pass several farm-houses; and my path also led close behind a good-looking mansion, which had formerly been, for many years, the residence of a single lady and her attendants. It was, at this time, rather in a dilapidated state, but yet it was a pretty spot: the garden and shrubbery were laid out very tastefully, and the path which led me past the house was overhung with a very large walnut tree. The mansion was then occupied by two individuals, a gentleman and his sister, who somewhat resembled it. They had seen better days; but, having been reduced in life, and being ignorant of the consolations of the gospel, they had both of them sunk into habits of intemperance; but still some traces of their superiority and dignity yet remained, as will be seen in the sequel.

It will be necessary to remark, that in the court which led to the kitchen-door, there was a large stone trough, which was supplied from a spring in the rising ground through which I had to pass; and in which there were three other troughs, one above another, for the use of the cattle. It is also necessary to observe, that if the trough in the court overflowed too rapidly, the aperture in the flag not being large enough to receive the water, it flowed into the hall kitchen. This circumstance I knew; and being, like too many boys of my own age, rather disposed to be mischievous, I let the highest trough into the second, that into the third, and the whole into that in the court: the consequence was, that the kitchen was inundated.

Whether some one unobserved by me had seen the mischievous affair, and had told the lady of the hall; or whether her suspicions had led her to fix upon me as the most likely boy to perpetrate such an act, I cannot tell; but one evening, while attempting to beat down a few walnut leaves, for the sake of their fragrance, before I was aware she had hold of me.

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"And so you are the person who let the water into the hall-kitchen the other day, are you?" said the lady, looking me full in the face, with a firm and dignified countenance.

I made no reply, for I was thunder-struck. As she was of a very slender figure, and rather aged, and I a great, strong lad, it would have been apparently an easy matter to have made my escape; but I had no power. I felt I was guilty; shame and confusion covered me, and I stood before her speechless and motionless.

"Come along," she continued with a firm, but not harsh tone of voice, "you must go with me into the kitchen."

She had hold of my arm, above the elbow; and leading me into the kitchen, she bade me sit down on a chair, at the end of the large oaken table which stood before the window.

"Sit there," said she, "till I return," and she went into the passage leading to the front door, which opened into the garden.

Being left alone, I might have gained my liberty, but I had not the presence of mind, nor had I courage, although I felt sure that her errand into the passage was for a horse-whip, the power of which I expected to feel every moment. I waited in the greatest perturbation of mind, perhaps ten minutes. At length the lady re-entered the kitchen, with—not a horse-whip, but a large plate of beautiful cherries, which she placed on the table.

"Do you like cherries, my boy?" inquired Miss ——, in a cheerful tone of voice.

I felt confounded, ashamed, overwhelmed, almost to suffocation, and, at length faintly muttered, "Yes, ma'am."

"Then you can stand up, and eat as many as you please."

I obeyed, but was fit to stagger with excitement; which the lady perceiving, said with a smile, "Do not be afraid; I have pulled the cherries on purpose for you."

She continued to speak kindly; I got more confidence; and my trepidation began rather to subside, and I ate a quantity of the cherries.

"Will you have any more cherries, my boy?" said the lady.

"No thank you, ma'am," was the reply.

"Have you a handkerchief?" continued she.

"Yes, ma'am," was the answer.

"Give it me," said the lady.

I did so; and tying up the remainder of the cherries in the handkerchief, she gave it to me, saying, "Now you can eat these at your leisure."

I thanked her, and departed; but just as I went out at the door, placing her hand upon my shoulder she said, "Now you will not let the troughs off any more, will you?"

"No, ma'am," said I, with emphasis.

Of course, I kept my word. I never disturbed the troughs, nor would I suffer any one else over whom I had any control to do the lady any injury; but any little act of kindness that I could do for her, I always did it with the greatest pleasure! Had she used the horse-whip it might have been different; but, oh, the law of kindness! QUARTUS.

TRAVELLING.

OH 'tis a pleasant thing to travel! I was always fond of it from my very boyhood; from the time when I used to trudge twice a year to see my uncle and aunt, who lived at a farm-house, full six-and-twenty miles in the country!

And now that I am in the middle of life, I find travelling an excellent relaxation from sedentary labour, an encourager of cheerfulness, and, I hope, a means of usefulness, as well as an incentive to praise and bless Him from whom every mercy flows.

'Tis a pleasant thing, when you have health, and strength, and good spirits, to travel on foot: you can stop when you like, and turn round and look at the prospect. You can call at a cottage, and talk to the old lady, as she goes on with her knitting, or loiter in the green lane, pulling down a brier, and plucking the delicious blackberries. You can stand and breathe the fresh air, as it comes over the blossomed bean-field, or gaze at the lambs at play in the knotty pasture. You can creep into the copse, and gather nuts from the hazel-trees, bunches of bright brown shellers, or make a posy of the violets, the cowslips, or the dancing daffodils. All these things you can do, and a hundred others; and as you go on, and your bosom beats with happiness, you can sing of the Divine goodness and mercy with a cheerful heart.

'Tis a pleasant thing to travel on

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horseback, when your steed is full of spirit and yet manageable. When you can walk leisurely, trot fast, canter pleasantly, or gallop rapidly, as it may suit your purpose. I was always fond of riding, from the time when the donkey that my father bought me, used to throw me over his head two or three times a day; the donkey was low, the green turf was soft, and I fell gently, so that it did not hurt me.

Oh, 'tis a fine thing to be mounted on the back of a bright chestnut, or coal-black horse, when he grows warm, and gets full of life, with the white foam falling from his mouth against his broad chest! When you feel as if you were almost a part of him, so capable of controlling him, and so firmly seated in the saddle! Many a pleasant ride have I taken, and many a journey have I travelled on horseback. It is said that "The merciful man is merciful to his beast;" and I am sure we ought to be very kind to so useful an animal as the horse.

Yes; whether we walk, or whether we ride,
Let us act a kindly part;
And wherever we go, and whate'er may betide,
Encourage a grateful heart.

'Tis a pleasant thing to travel by gig; for you are so much at your ease, and have so little to do, that you may journey far without weariness. It is true that you should always keep the reins well in hand, in case of a trip, and be ready in every accident that may take place, to act with presence of mind; but the very watchfulness required, rather adds than takes away from the pleasure you enjoy: you would grow weary without it. Travelling by gig is a very pleasant mode of conveyance. You can snatch a glance now and then at the country round you, you can fling a tract now and then into the road, you can admire your horse as he arches his neck, points his ears backwards and forwards, and lifts up his feet as regularly as clockwork, and you can indulge a cheerful or a sober train of thought. Many an agreeable journey have I made with a horse and gig,

When the summer has smil'd, and the winter frown'd,
At the spring of the year and the fall,
When the heavens and the earth have been beautiful,
And God has been seen in all.

It's a pleasant thing to travel by post-chaise; the rattling of the wheels over the stones, the jingling of the windows, the clattering of the horses' hoofs, the odd figure of the post-boy jumping up and down, cracking his short-handled whip, and the rapid rate at which you dash along, altogether fills you with animation.

I have travelled many a time by this pleasant conveyance, and my spirits have risen with the occasion. Wide open flies the turnpike-gate as you approach; when you rattle under the gateway into the inn-yard, the landlord and landlady make their appearance with smiles, and the waiter turns round the brass handle of the chaise-door in haste, to hand you down the steps. Again, I say, it is a pleasant thing to travel by post-chaise, and hundreds of people agree with me in this opinion.

It is pleasant to travel by stage-coach, or by the mail, especially if you are outside on a fine summer day. You go along at so delightful a rate, and you have nothing to do but to enjoy yourself. The four grey horses, with their bright brass harness, the coachman with his "upper benjamin" wrapped round his legs, and the guard with his red coat and laced hat, all these are pleasant objects to gaze on. You feel so much at ease, so independent, and so comfortable, that you pity every foot passenger you meet; and you say to yourself, "I wonder how any one in his senses can ride inside, this delightful weather!" Many a hundred miles have I travelled by stage-coach and mail, nor should I be very unwilling to set out on a fresh journey to-morrow. The sound of the horn, and the changing horses, and the towns and villages you pass through, and the workmen on the road, who are sure to leave off work, and lean idly on their spades as you pass; and the guard flinging down his letter-bags as he passes, and the wheels flirting up the dirty water after a shower like so many fountains, the dogs that run after the coach barking, and the locking and unlocking of the wheels, afford a constant variety to the passenger: so that it is a very agreeable thing to travel by the stage-coach or by the mail.

Almost every one must have seen the mail set off.

The horses start, and the wheels turn round,
And hastily fade from the view;
And 'tis well to reflect while they rapidly run,
That our lives run rapidly too.

'Tis a pleasant thing, also, to go a jour-

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ney by the rail-road. When you are once set going, you feel that you are travelling in right earnest. Away goes the steam-engine, almost flying along the iron-pathway, leaving a long line of smoke, eight or ten feet from the ground; and away go the steam carriages after it, filled with company. One talks of the useful discovery of steam; another wonders what will be invented next; and a third doubts, after all, whether the affairs of men absolutely require them to hurry on so fast through the world. Still, on you go, and before you can believe it, you are at your journey's end. I have travelled on the rail-road, and, when you are in a very great hurry, it is a capital mode of conveyance.

Thus through life's stage we hurry on,
And our journey soon is o'er;
And this beauteous earth, that gave us birth,
Shall see our face no more.

It's a pleasant thing to travel by boat along the river, when you have plenty of time on your hands. Oh how delightfully do you glide through the clear running stream! I have sailed as much as a hundred miles together down the winding Wye, fairest and most romantic of British rivers! Sometimes gazing on the pebbled shallows, and sometimes on the dark deep waters. It was pleasant to dart down the rapids, pleasant to gaze on Chepstowe and Goodrich Castles, and Windclif and Tintern Abbey; and pleasanter still, looking up at the snow-white sun-lit clouds, as they glided through the clear blue sky, to sing with the heart as well as the lip,

"When all thy mercies, O my God,
My ardent soul surveys,
Transported with the view, I'm lost
In wonder, love, and praise."

It's a pleasant thing to travel by steam-boat, when the sun shines, and the river is broad, and the music plays, and the passengers wear smiles on their faces. I have travelled by steam-boat, and talked with the captain and passengers, and stood by the pilot as he turned round his wheel to guide the vessel, and leaned over the bulwarks, musing on the paddle-wheels tearing their way through the waters. The band has played the while, and the huge vessel has obeyed the pilot as obediently as a child. Sometimes, too, I have met with a fellow-passenger, who has made a serious remark, an acknowledgment of God's goodness, and we have talked together of holy things, and of the way of salvation through the Saviour of sinners.

'Tis pleasant in our pilgrimage,
In fair or stormy weather,
To meet a traveller Zion-bound,
And journey on together.

It is a pleasant thing to travel over the mighty ocean in a ship, when the broad sails are filled with a favourable wind, and the sea and the sky seem to lose themselves in each other. When the billows of the great deep sparkle with beautiful colours, when the dolphin plays, the flying-fish leaps from the water into the air, and the sea-gull hovers over the foam-fringed waves. I have sailed on the billowy ocean in a gentle breeze, and I have in a storm mounted up as if going to the heavens, and plunged downwards as if descending to the bottom of the sea. Yet still the rudder has guided the ship, and still the sails have enabled her to keep her course. Wonderful is the power which God has given to man! enabling him to say to the bounding waves, "Bear me safely on your back," and to the blustering winds, "Waft me forward on my course." Truly, "The Lord is a great God, and a great King above all gods. In his hand are the deep places of the earth: the strength of the hills is his also. The sea is his, and he made it: and his hands formed the dry land. O come, let us worship, and bow down; let us kneel before the Lord our Maker."

Where ocean rolls his mighty flood;
Where billows rise and fall;
Wisdom and power are infinite,
And God is all in all.

It will be well for us to reflect that, whether we travel high or low, by land or by water, by ship, steamer, or boat, by rail-road, stage-coach, or post-chaise, by gig, horseback, or on foot, that we are all travelling towards the grave, that every stage brings us nearer our journey's end, and that our journey must, of necessity, be a short one.

It may be that we shall see three score and ten birth-days; perhaps we may be strong enough to witness four score, but he who looks back to his childhood, even though his hairs are grey, regards it as yesterday. "We spend our years as a tale that is told." Is it well then to think so fondly of a bubble that is so soon to burst? of a dream that has

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well nigh passed away? Will it not be better to think less of this world, and more of the next? Less of what is, as it were for a moment, and more of what shall endure for ever? Surely it will. Begin, then, reader, to do this at once.

O gird thy loins, set out for heaven,
Ere earth's enjoyments wither;
And give not slumber to thine eyes
Till thou art journeying thither.

G. M.

EVIDENCES OF A LOWLY MIND.

The humble are ever thankful, and forward to sing the praises of God; for they esteem themselves less than the least of all his mercies. He who is lowly in heart composes and fits his mind according to the word of God, which he takes as his counsellor and guide. He will attempt nothing without seeking direction from the oracles of God, the word of truth. In a season of affliction he quiets his heart, and neither frets nor repines against the Lord; nor does he use unlawful means for his deliverance. He is not forward to meddle in other men's matters, but keeps himself within the limits of his proper calling. He will not, through an overweening conceit of his own wisdom or strength, intrude into matters that are too high for him; but in humility waits till the Lord shall call him forth. Proud men deride judgment, and cast off the commandments of God, either stubbornly resisting or slightly regarding what the Lord has spoken; but the humble, with fear and trembling, unreservedly submit themselves to their Maker's revealed will. The humble are much in supplications. Divested of self-confidence, and emptied of conceited fulness in himself, he seeks abroad for the supply of his deficiencies. In the persuasion that of himself he can resist no temptation, endure no cross patiently, perform no duty in an acceptable manner, he earnestly seeks help from on high. The humble soul will do all things without murmurings and disputings, and thus seeks to be blameless and harmless without rebuke, in the midst of a crooked and perverse generation; esteeming others better than himself.—*Ball.*

THE CHARACTER OF THE GODLY.

The Book of Psalms begins with declaring the blessedness of the righteous. But in order that we may take nothing for granted, nor conclude that we are interested in the covenant of promise, when, in fact, we are strangers to it, the psalmist before telling us wherein their blessedness consists, describes their character, both negatively and positively. He first does it negatively, in which he points out three different degrees or shades of character.

The first is "the ungodly." These are destitute of the fear of God; and that the righteous may not be a perpetual reproof to them, they would have him enter into their counsels, and second their schemes, and advance their mischievous designs. But his language is, "O my soul, come not thou into their secret, into their assembly, mine honour, be not thou united." And as he walks not in the counsel of the ungodly, so neither does he stand in the way of sinners, which is the next step in impiety; for those who have cast off the fear of God, will soon break out into open rebellion against him. With these he will not stand in the way; will not associate with them, will not make them his chosen companions; nor does he "sit in the seat of the scornful," and this is the height of impiety; and an easy transition from rebellion against God, which leads them to scoff at him, and his ways.

Let us seriously examine if we answer to this description of the good man, as well as to his positive excellence; for then, and then only may we appropriate the blessing attached to such a character.

C. J. M.

SECRET THINGS BELONG UNTO THE LORD.

Some Christians are for knowing such things as God hath not revealed: but it is a dangerous thing to be prying into God's secrets. "Such star-gazers," as Mr. Vine says, "fall into pits and quagmires." How many persons lose themselves in the maze of their own fancies and speculations, and not only lose themselves, but like *ignes fatui*, mislead others! "Impertinent and unprofitable knowledge," says Bishop Hall, "hath been the hereditary disease of the sons of Adam and Eve." Many are for curiosities, neglecting the doctrine which is according to godliness.—*Barrett.*

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THE GUINEA-FOWL.

The feathered tenants of the farmyard, which man has reclaimed and brought into such a state of dependence as to gather round his door in expectation of their due supply of food, are peculiarly interesting; not only their utility, but the circumstances (as far as we can collect them) which attended their introduction into civilized Europe, interweaving their history with that of our race, stamp them with a degree of importance to which no birds besides are entitled.

We have already presented our readers with sketches of the history of the common fowl and of the turkey, and the subject of the present paper is the guinea-fowl, or *peritados*.

The guinea-fowl, as its name sufficiently indicates, is originally a native of Africa, and was well-known both to the ancient Greeks and Romans, especially, it would appear, to the former, from whom it received the name of *meleagris*, which, strange to say, has been attributed by many naturalists, as Belon, Gesner, Aldrovandus, etc., to the turkey, an aboriginal of America, a country of which the ancient Greeks and Romans never dreamed, and of the productions of which they were necessarily ignorant. The turkey, indeed, was unknown in Europe until the beginning of the sixteenth century, and most probably not until after the subjugation of Mexico by the Spaniards, that portion of America being discovered by Grijalva in 1518. In 1526 it is described by Oviedo as existing in a state of domestication in the islands and the Spanish main; and in 1541 it obtained a place among the delicacies of the table in England. These facts render it the more strange, that men of learning should have confounded that bird with the meleagris of the Greeks and Romans, a species characterised by the pearl-spotted appearance of its plumage; for, according to the ancient fable, we learn that the sisters of Meleager, mourning for the death of their brother, were turned into birds called *meleagrides*, (in the singular number *meleagris*,) after the name of their brother, having their feathers sprinkled with tear-drops. From this fable, which indicates the markings of its plumage, we infer a very early acquaintance of the Greeks with the guinea-fowl; but at what period it became introduced to Greece, or under what circumstances, we cannot ascertain. Aristotle mentions it only once in his work, under the name of *meleagris*, and says that its eggs are marked with little dots. Varro (*De re Rustica*, lib. iii.) describes it under the title of "the fowl of Africa," which the Greeks call *meleagris*, stating that it is of a large size, with spotted plumage, of a round lumpy figure, and rare at Rome. Pliny says, the race of "Fowls of Africa" were of a rounded form, with spotted plumage, etc., as Varro had done; he repeats Aristotle's observation respecting the eggs; and elsewhere observes, that the birds from Numidia were the most esteemed, and that the breed had obtained, *par excellence*, the title of the Numidian fowl.

Columella, an excellent writer on husbandry, in the reign of Claudius Cæsar, considered that two species of guinea-fowl were domesticated, the one with red wattles, the other with blue; the first he termed "meleagris," the latter "African fowl."

The difference, however, noticed by Columella is merely sexual; the male having the wattles blue, the female red; unless, indeed, we are to believe that the ancients really possessed two species in a domestic state, which is not probable. The guinea-fowl was much more common in Greece than in ancient Italy, as we gather from the account of Varro on the one hand, and Pausanias on the other. The former writer states that these birds were sold at a high price in Rome, on account of their rarity; whereas the latter says, that the *meleagris*, with the goose, was the usual sacrificial offering of persons in humble circumstances at the idolatrous rites of Isis.

According to Athenæus, the inhabitants of Ætolia were the first among the Greeks who introduced this bird into their country. In the middle ages we lose all trace of the guinea-fowl; no writers of that period notice it, as far as we can learn, nor can we distinctly point out the period of its introduction into western Europe and the British Isles.

Belon regards the introduction of this bird into western Europe as a consequence of the navigation of vessels to India round the Cape of Good Hope, which led to an acquaintance with the western borders of Africa, and, consequently, to the exportation of the productions of Guinea and other parts of the coast, of which little or nothing was previously known; the term "guinea-

fowl" seems to favour this idea, notwithstanding, however, it may have been introduced into Europe from Syria, during the crusades, or afterwards, and so gradually spread. Diodorus says, that "the extreme parts of Syria produce these birds," and they have been long common there. Buffon indeed informs us, on the authority of Longolius, that the Mohammedans were accustomed to sell these birds to the Christians, under the name of "fowls of Jerusalem," and that the fraud being at last discovered, the Christians sold them again to the Mussulmans under the name of "fowls of Mecca." The date of this fraudulent mercantile transaction is not mentioned, and we have not been able to see the work to which Buffon refers.

If Europe, in modern times, received the guinea-fowl from the east, the West Indies and South America most probably received it with slaves from Guinea.

Buffon informs us that the name of the bird in the Congo country is *Quetelé*, Marcgrave (see *Hist. Nat. Brazil.*) being his authority. Marcgrave also states that the bird is common at Sierra Leone; Adanson asserts the same with regard to Senegal; and Dampier notices it as inhabiting the islands of Cape Verde. The ancient writers, Strabo, Diodorus Siculus, etc., inform us that the meleagris inhabited Barbary, Egypt, and Syria. In Nubia and Abyssinia it is abundant, and from those regions it is most probable that the ancients derived their breed. The bird is also common in various parts of Southern Africa; Sparman saw it in flocks, and on one occasion killed six at a shot, and wounded several others. Le Vaillant gives a similar account, and notices their abundance about Droog River; he adds, that, when frightened from the trees, they run a good way, and on their attempting to take wing again, are often caught in numbers by the dogs, without a shot being fired; and that sometimes the barking of dogs at the foot of the trees, on which they roost at night by hundreds, will so terrify them as to render them an easy prey to those who wait for them below.

In speaking of the localities in which the guinea-fowl has been noticed, as indigenous by travellers, we are not to be understood as referring exclusively to one species, though only one species has been, or at least is now, in a state of domestication. Latham records four distinct species:—1. The common guinea-fowl, or guinea pintado (*Numida meleagris*) which, in a domestic condition, is so universally spread, and which, in places where it has been formerly introduced, as in the West Indies and various parts of America, etc., is found in as wild a state as in its original country. 2. The Egyptian pintado, (*Numida Ægyptiaca,*) of this species little is known; it is most probably a variety of some other. 3. The mitred pintado, (*Numida mitrata,*) found in Guinea and Madagascar, but "common at Mozambique, and also in Abyssinia." 4. The crested pintado, (*Numida cristata,*) a very beautiful species, found at Mozambique and other parts of Africa; it is less than the common guinea-fowl. In 1825 a new species of the most brilliant colouring was introduced to science, the account of which may be seen in the "Zoological Proceedings for 1835," p. 103, where it is described under the name of *Numida Rendallii*, Ogilb. It was brought from the banks of the river Gambia, where it is the species usually met with. In size it resembles the crested species; "the head and upper part of the neck are bare, the former covered with a wrinkled scalp-like skin, gathered to a small keel-shaped ridge in the centre, about half an inch in length, and not more than a quarter of an inch high. The neck is black, naked principally on the throat and sides, and covered on the back with glossy black hair, or rather small feathers, with the beards so fine, as to be perceptible only on close examination. The lower part of the neck and breast are covered with feathers of a beautiful violet colour, without spots, clearest on the breast, but with a browner hue upon the upper surface. The back, shoulders, and rump, are of the usual brown colour, speckled thickly with minute white spots, each surrounded with an intensely black ring, much smaller and more numerous than in the common species, and intermixed with an infinity of still more minute points. The greater coverts of the wings, and the whole under surface of the body are black, with large white spots; the quill-feathers, spotted towards the shaft, and barred transversely on the lower margin only, and the tail-feathers light-grey, with white spots in a black ring, and interspersed with numerous black dots or points. The white spots of the coverts, quills, and belly, are not sur-

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rounded by black rings, like those of the back and tail. The vulturine pintado, *N. vulturina*, Hardwick, first described in the "Proceedings of the Zoological Society." This splendid bird is little larger than a pheasant, the head and throat are bare; brown silky feathers occupy the ears and occiput, neck naked at its upper part; its lower part and the chest being clothed with long hackles, having a white dash down the centre, surrounded with black, and having mazarine blue edges, except at the forepart of the neck, where the feathers want the blue; the feathers of the chest uniform, rich mazarine blue. Rest of plumage black, dotted with round spots of white, besides which each feather is irregularly barred with most minute zigzags of white, except just around the large dot. Quill-feathers black, with six dotted lines of white. Inhabits Western Africa. One specimen alone of this species exists in England, we believe in Europe; it is in the Naval and Military Museum.

The introduction of the guinea-fowl into our island is comparatively of very recent date; its name does not occur in the list of birds in the famous feast of Archbishop Nevill, in the reign of Edward IV., nor in the "Duke of Northumberland's Household Book, 1512;" nor is it mentioned in the "Household Book of King Henry VIII." Yet, in all these lists, the peacock, or *peion*, makes a conspicuous figure.

In the early part of the 18th century it was tolerably common; and those variations of plumage to which we see it subject, (and which are indicative of a reclaimed condition,) were noticed by Edwards in his "Gleanings." The inference is, that its introduction took place about the latter end of the 16th or the beginning of the 17th century. All, however, is conjecture; for it would seem that history is too dignified to notice or record events like this; hence the circumstances attending the subjugation of all our domestic animals, the period at which man began his first attempt, his failures or successes, the changes wrought by such success upon tribes and nations, points of far more interest and importance than the details of wars, murders, miseries, and all that swells the historic page, have been neglected; affairs of this unobtrusive, but beneficial nature, have nothing in them to carry captive an excited imagination, or to minister to the pride and vanity of the human heart.

The common guinea-fowl, in a wild state, and indeed all the other species, are fond of low humid situations, along the banks of rivers or marshes; and we learn that the wild race in St. Domingo, and others of the West Indian Islands, originally from Guinea, give preference to such localities. It is eminently gregarious, assembling in large flocks, which exhibit much of the manners of the partridge, except that they roost in trees; the rapid mode of running, and the low straight flight of the guinea-fowl, are those of the partridge. Wild and shy, it appears, however, to be very easily tamed, and even rendered familiar; for Bruce relates, that being on the coast of Senegal, he received from a princess of the country a present of two guinea-fowls, a male and a female, both so familiar that they would come and eat out of his plate; and that having the liberty of flying ashore, they would come regularly to the vessel at the sound of the bell, which announced dinner or supper. (See "Troisième Voyage de Bruce, publié par Labat.")

Like the fowl, and other gallinaceous birds, the guinea-fowl is fond of covering its plumage with dust, for the sake of freeing the feathers from insects; it also scratches up the ground in search of seeds and larvæ, on which it feeds. The shrill noisy voice has been noticed by all writers. Brown, in his "Natural History of Jamaica," terms it *gallus clamosus;* some writers compare the noise to that made by a door turning on rusty hinges; others, to that of a wheel revolving on an ungreased axle-tree. Ælian says, the meleagris almost pronounces its own name. So disagreeable to some ears, indeed, is its note, and so perpetually is it repeated, that we have known persons object, on this ground alone, to keeping it on their premises. Restless, and addicted to wandering about the fields, and impatient of restraint, the guinea-fowl in domestication retains much of its original disposition, and appears less dependent on man than either the fowl or the turkey. We have seen small troops ranging the meadows upwards of a mile from the farm to which they belonged; and have been informed, that after being apparently lost for some weeks, one of the hen birds will make her appearance with a young brood, like little partridges, attending upon her. When confined within the limits of a small space, however, the

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female will rarely hatch her eggs, the want of freedom rendering her impatient, and, at the same time, interfering with her unbroken instincts; for few birds are so recluse and shy during the season of incubation. The eggs are smaller than those of a fowl, and are of a pale yellowish red, minutely dotted with darker points. The number varies from 12 to 25; they are placed in a scratched depression on the ground, among thick brushwood, or any dense cover, forming a good concealment.

In a state of domestication, though the guinea-fowl is subject to some variation of markings, the characters of the plumage are never lost. The most common varieties are distinguished by white breasts; in these the general colouring wants that depth and richness which obtain in the less degenerate breed. We have occasionally seen cream-coloured varieties, in which the white spots were still easily distinguishable, being surrounded by dusky rings. A detailed description of the colouring of the guinea-fowl, now so well known throughout every part of our island, need not be attempted.

Among the Romans the guinea-fowl was considered as a luxury for the table; and in our times its flesh is accounted excellent, especially that of young birds, the flavour being rather that of game than of the common fowl.

In the colder latitudes of Europe, the guinea-fowl is still unknown. Linnæus makes no mention of it in his *Fauna Suecica;* nor is it, we believe, to be seen in Denmark, Norway, or northern Russia. The term *pintado*, as used by Latham and other English writers, (but which is evidently a borrowed word,) and the French name *peintade* indicate the painted style of plumage, the agreeable and regular distribution of colours for which this beautiful bird is so remarkable. M.

PROSPECT FROM THE SUMMIT OF MONT BLANC.

I AM not ashamed to own my utter inability to describe that of which no words can fitly tell. For standing as I did on that mysterious "pyramid of frozen light," that Goethe saw, and which he well nigh deemed some heavenly Pharos, shining with the stars, where should I begin to represent a panorama, far beyond the boundaries of an eagle-vision? — how delineate a great half-moon, the Alps, reaching from Hungary to southern France; spanning at once the Mediterranean, and the Adriatic Seas? If on the Col de Balme I had no eye for details, how much more were they not inappreciable, from the centre of a circle, having for its radius more than two hundred miles! Is it surprising, that in such a picture I was overwhelmed and lost?

Mine was a curious state, just as the apex of the mountain was attained. Now, utterly exhausted, gasping, fainting, caring nothing for the spot on which I stood, sinking upon the snow. A few moments of repose, with normal breathing, and all the exhaustion, faintness, and indifference gone. Then scarcely crediting, but at length assured, that the mountain-top was really gained, receiving back my lost enthusiasm, and turning with a thrill of exultation never felt before, towards the unutterable greatness of the scene.

The actual range of sight, though limited by Alps in various directions, comprehends nearly all Sardinia, the western half of Switzerland, one-third of Lombardy, and an eighth of France. This immense extension, because of Alps that bound it on the north-east and south-west, is really of an oval form; its longitudinal diameter reaching from Mont Morran, in France, north-west, to the mountains of Tuscany, south-east.

I must not attempt more than a bare enumeration of some of the most striking objects. And first, of *Mountains.*

Northwards,—in the foreground, and below me, were the Bréven and the Aiguilles rouges; then, beyond, the white dome of Buet, with other mountains of Savoy.

North-east,—the Diablerrets; further off, the Gemmi's bifid top; and then, in line, the other splendid snowy peaks of Berne; of which the Eiger, Jungfrau, and the highest of them all, the pointed Finster-aar-horn, (the horn of the dark eagle,) were perhaps the most distinct: those Bernese Alps, which, seen from the summit of the near Faulhorn, had seemed so vast, now forming but an inconsiderable part of the mighty whole.

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Southwards,—nearest, the Grecian Alps, including the Little St. Bernard, Mont Iséran, Mont Cenis; and separating Savoy and the Tarentaise, west, from Piedmont and Aosta, east. Then, south and south-west, the clustered Cottian Alps, Mont Viso, which gives rise to the river Po, at their most southern end. Here then began the Maritime Alps, which, extending still southwards, afterwards divide, sending one branch south-west, into Provence, another south-east, terminating with the Col de Tende.

South-east,—the Apennines, in beautiful distinctness, though distant nearly a hundred and fifty miles.

East,—not the Great St. Bernard, for that mountain is not seen, but just beyond it, Mont Velan; further off, the Matterhorn; and, distant about fifty miles, a seven-pointed, crown-like mountain, with most enormous glaciers. It was Monte Rosa, seated majestically at the east extremity of the Pennine Alps, the *Alpes Summæ*,—of which Mont Blanc occupies the western end. The former mountain takes its name, Welden thinks, from the rose-tint, given peculiarly to it, from its situation, by the rising sun.

North of east,—the Furca, and the St. Gothard. West,—close below me, the Col de Bonhomme, and North-west,—the whole chain of Jura, from end to end, reaching from Lyons to Basle.

Of Plains and Valleys.

North,—at my feet, the Vale of Chamoniæ, with the Priory, the latter distant two leagues and a half, in a straight line; the valley winding north-westward, towards Servoz and Sallenche. Much further off, between the Chain of Jura and the Bernese Alps, the great vale of Switzerland.

South-east,—at the mountain's foot, Aosta; much further off, the plains of Piedmont, bounded by the Apennines; and beyond the latter, part of the coast of Genoa.

Further eastward,—Lombardy; beyond which, the eye was lost in a vast blue space, that continues level to the gulf of Venice.

North-east,—part of the valley of the Rhone, walled by the Helvetian Alps. West, the plains of France.

Of Waters.

North,—the silver Arve, winding through the vale of Chamoniæ; then wending towards Geneva, where it pours itself into the Rhone.

North-west,—part of Lake Leman, like a crescentic pond, so small, and seeming not far off, though distant fifty miles. Its eastern half hidden by the mountains of Savoy.

North,—and further off, the lake of Neuchatel.

In the south-east, the windings of the Po and other streams; but not the Mediterranean Sea,—that is hidden, Welden says, by the heights of Cogne and Saone.

These are a small part only of the chief mountains, valleys, plains, and waters. How vast the sea of Alps! the names of whose waves I did not try to learn; with vales and rivers winding through them, seeming mere dells and brooks, plains and lakes, that looked like fields and ponds.

The human eye, however, cannot appreciate the distant objects, and the nearer ones, unless lofty, can be but indistinctly traced, in such a field of view. I saw however, clearly, one range of mountains, more distant than any of those named; these were the heights of Tuscany, between which and my station there intervened about two hundred miles.

And all of this vast panorama was seen beneath a sky of ebony, in which *there was not a visible cloud.*

But not extent alone; the kind of scenery was wonderful: and there was no part of it that held the eye so much as the chain of Mont Blanc itself. Seven miles in breadth, and five-and-twenty long, a host of stern and rifted rocks, the dark Aiguilles, projecting through seas of snow, and the bright whiteness of "most resplendent glaciers;" their inaccessible and needle-tops, to which we had, with dizziness, looked up, now, surmounted, far beneath our feet. We stood upon that placid pyramid, seen from the Col de Balme, enthroned and dominant among his vassal peaks, and years which no man can number, holding his icy, silent, solitary reign.

The eye took in at once the chill abodes of unrelenting frost, and Italy's fair land, "where citrons bloom;" it turned from the frozen summits of the highest Alps, down to the velvet verdure of the vales.

Far in the north, there rose the mountains of the patriot Wilhelm Tell. South, hidden by the Apennines, and,

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distant fifty leagues, the birth-place of Columbus, of whom Genoa may well be proud. In this direction lay Turin, stormed by the Carthaginian Hannibal; in that Chamberi, through which place Cæsar led his mailed legions, when first marching into Gaul. Here Voltaire had conceived and penned his dreadful blasphemies; here a Rousseau, and there a Gibbon wrote, and after having written the last sentence of his history, looked at the summit of Mont Blanc. Here was the Col du Geant, where the illustrious Saussure had sojourned fourteen days: I stood upon the spot he mainly had been the means of man attaining. *Martin Barry's Ascent*, 1834.

LOCUSTS AND LOCUST-BIRDS.

The year (1828) having been ushered in by swarms of locusts, which literally darkened the heavens for several days, every part of the country round about this place was in a truly deplorable state. It is utterly impossible for any one who has not been an eye-witness of those flying armies, to form an adequate idea, either of their numbers or destructiveness. When on the wing, they appear like a black cloud at a distance; but when they arrive, the density of their hosts intercepts the solar rays, occasioning an awful gloom like that of an eclipse, and causes a noise like the rushing of a torrent. One single flight not unfrequently covers the face of the country for many miles every way. Here it appears they were so thickly spread on the ground throughout every street, that it was with the utmost difficulty the inhabitants kept them out of their houses. The water-conduits were filled; and the putrid effluvia arising from the heaps of dead ones became so offensive as to excite alarming apprehensions. The river itself was contaminated to such a degree that the waters stank, and a pestilence was feared as the consequence. Having devoured every green thing of herbage and vegetable kind, excepting peas and French beans, those voracious insects next fell upon the trees, the branches of which were actually weighed down with them. Every vine was attacked, and the chief of the vineyards destroyed. The manner in which they effected this was remarkable. Not a grape was eaten; but the thread by which the bunch hung suspended from the branch was bitten off close to the stem; consequently, the fruit fell to the ground, and, being unripe, it was in a great measure useless.

Many of these little creatures, when separately viewed, are extremely curious, and very pleasing: but when considered collectively, as the destroyers of a country, the sound of them is really awful. Desolation and famine mark their progress; all the expectations of the husbandman vanish; his fields, which the rising sun beheld covered with luxuriance, are, before evening, a desert; for wherever they alight, not a leaf is left upon the trees, a blade of grass in the pasture, nor an ear of corn in the field.

Providence, however, rarely permits a bane, without also affording us an antidote. "We are happy," says the editor of the 'Graham's Town Journal,' (February, 1832,) "in being able to announce that the locust bird has at last visited this district in such numbers, that there is every prospect of a deliverance from the locusts now in their larval state. Mr. D., residing at the Kaha, states, that a few days ago, on his way to town, his attention was attracted by the singular appearance of one quarter of the sky, which appeared darkened, though no clouds were to be seen. The appearance was soon explained by the arrival of myriads of locust birds, who fell voraciously upon the young locusts, without so much as noticing Mr. D.'s wagon, although it passed through the midst of them."

The bird here alluded to seems to be a species of thrush, migratory in its habits, and only met with in places frequented by the migratory locust. The head, breast, and back, are of a pale cinereous colour; the abdomen and rump, white; wings and tail, black—the latter short, and a little forked. From the angle of the mouth, a naked area of sulphurous yellow extends under the eye and a little beyond it; and there are two marked black stripes under the throat. The specific name of *gryllivorus* may with propriety be given to it, as its whole food seems to consist of the larvæ of this insect, at least where they are to be obtained. The numbers of the gryllivori are not less astonishing than those of the locusts. Their nests, which at a distance appear to be of great magnitude, are found on examination to consist of a number of cells, each of which is a separate nest, with a tube leading into it through the side. Of such cells, each

nest contains from six to twenty; and one general roof of interwoven twigs covers the whole, like that made by the magpie. Their eggs are of a bluish white, spotted here and there with small faint reddish specks, and seldom exceeding five or six in a nest.

Kay's Caffraria.

OLD HUMPHREY ON HEDGES AND DITCHES.

I LOVE to point out a source of profitable pleasure to the poor. The rich have their dainty fare and their goodly apparel; their lordly mansions, their paintings, and their statues; their carriages, their gay equipage, and their fine horses; their parks and their pleasure-grounds, and I do not begrudge them their possessions. Willingly would I increase their joys; but I had rather, much rather, cast a beam of sunshine on a poor man's brow.

And when I speak of a poor man, think not that I mean to pass by a poor woman. Oh no! I have found many of those of whom the world is not worthy, habited in the garb of poverty, walking abroad in an old red or brown cloak; or, pondering the Bible at home, with an old blue or yellow handkerchief over their shoulders. Old Humphrey has had many a kindly gossip with humble-hearted old women, servants of the Lord, and been both comforted and edified by their Christian conversation.

I want to point out to the poor the enjoyments within their reach. It is no use talking to them of distant and expensive pleasures, for these they cannot attain. I want them to regard common things with interest, and to get even from hedges and ditches an addition to their joys.

Whether it be that I am more happy than my neighbours in stumbling upon pleasant objects, I cannot tell, but hardly ever do I see a hedge in spring, summer, autumn, or winter, but I could gaze upon it with joy. At one time the quickset is budding out with fresh green leaves; at another, the hawthorn is in flower, or hung with innumerable berries; at the fall of the leaf, the young plum trees are rich in their bleached, and sere, and variegated foliage; and in winter, the frost work on every bush fills me with admiration and delight.

Now these things are all within the reach of the poor. Come, then, ye poor, regard more attentively these proofs of your heavenly Father's wisdom, and you will think yet more highly of his goodness and his grace.

But it is not the hedges alone, but the ditches also, that exhibit specimens, costly specimens, of the workmanship of the great Creator. At this present time I know a ditch so full of nettles, with their fine purple bloom; large dock leaves, with holes here and there in them, and turning a little brown; high, long, quaking grass that trembles at the touch; and flowery thistles, prickly burdocks, silvery colts-foot, and straggling blackberry brambles, that it is, in itself, quite a picture.

The bee seems always humming there, and the slender loined wasp, and the big blue fly, and another of shining green, move about from one plant to another. I could almost persuade myself that the butterfly settles on a flower that I may admire him, and that the dragon-fly knows of my coming. That ditch is a goodly garden in my eyes, and teems with God's winged creatures, rejoicing in the beams of the glowing sun.

Do you know of no ditch of this kind? Surely you must be short-sighted if you do not, for they are every where to be found. They are passed by daily, without being duly regarded; but to enjoy them you must see them with your hearts, as well as with your eyes, and view them not in reference merely to your own use, but as the works of your adorable Creator.

When you next walk abroad, look around you with more attention; every plant and every insect is worthy of your regard; the speckled lady-bird on the nettle leaf, the crawling caterpillar on the hawthorn spray, and the industrious spider, weaving his web across the thorny furze, are worthy of your closest inspection.

I might direct your attention to the beauties of nature on a broader scale; but my present object is to show that even the hedges and ditches have enough in them to make you pause with interest and admiration. The more we think of God's goodness, power, and wisdom, in his works, the more highly shall we, if taught by the Holy Spirit, adore his matchless mercy in Jesus Christ our Lord.

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WHAT IS FAITH?

It is a firm assent, or confident persuasion of the truth of whatever God hath spoken, testified, promised, commanded, or threatened in his holy word. This assent is absolute and unlimited; it extends to the whole truth, promises, threatenings, and commands. It will not pick and choose, take and leave at its pleasure; but if it apprehend in any one instance what the Lord saith, it will receive his testimony, simply because it is God's word, even though it may, in some things, exceed human capacity and likelihood. "So worship I the God of my fathers, believing all things that are written in the law and in the prophets," Acts xxiv. 14. To disbelieve whatsoever God hath made known in his word is sinful and damnable, because it is in effect making God a liar, 1 John v. 10.

Faith presupposes knowledge, and yields assent to the word of grace, relying upon the authority of God, who is true in all his sayings, sincere, faithful, constant in all his promises, and can neither deceive nor be deceived. Abraham believed God, Gen. xv. 6. The word imports that he considered the words of God to be sure, certain, stable, and constant. The saying of Moses, "Israel will not believe me," Exod. iv. 1, meaneth, that they would not assent or give credit to his words. And when it is said, "Israel believed the Lord and his servant Moses," it is to be understood, that they gave credit to the word of the Lord spoken by his servant Moses. This is plain from the exhortation of Jehoshaphat unto the people, saying, "Believe in the Lord your God, so shall ye be established; believe his prophets, so shall ye prosper." And that of David, "I believed, therefore have I spoken," Psa. cxvi. 10.

Belief is always grounded upon the authority and reputation [for veracity] of Him whose word we believe, and must needs have reference to something spoken or revealed as the object; but it may be sustained and strengthened by other motives and inducements, experiments, and probabilities. Many objects of faith may also be evident, and that which is believed may also be seen. "Thomas, because thou hast seen me, thou hast believed," John xx. 29. Though faith and science differ, yet they may stand together. Faith stands upon revealed authority; knowledge or science on evident demonstration."—*Ball.*

MERCY, GRACE, AND LOVE, FLOWING FROM THE CROSS.

God is love; and the manifestation of it to us was his sending "his only begotten Son into the world, that we might live through him," 1 John iv. 8, 9. Hereby he not only declared himself placable—not only desirous of manifesting a scanty goodness to the creature, but to show that his nature was enriched with the choicest love and grace, and his desire that it should flow out in the highest manner through a Mediator to a polluted and rebellious world. In him God opened his bowels, which lay secretly yearning, and "brought life and immortality to light through the gospel." 2 Tim. i. 10. Both mercy and love were manifested. Love is a perfection of a higher strain than mercy. Mercy may be prevalent where love is absent. Mercy hath for its object a thing miserable. Love hath for its object a thing amiable; pardoning grace hath for its object a thing criminal. The mercy of God is manifested in the death of Christ for us when we wallowed in misery. The pardoning grace of God is declared upon us as we are loaded with guilt. Love is manifested in being well-pleased with us in Christ, his best Beloved, after we are united to him by faith, and made comely and amiable by his comeliness put upon us.—*Charnock.*

DIVINE SUPPORT.

What a foundation is there for support and consolation to all pious people, who keep close to God in the way of faith, love, and obedience! They have the "Father Almighty, Maker of heaven and earth," for their Father. Some reckon themselves happy to have the countenance of great ones, who often prove like Job's brook that passeth away, Job vi. 15. They are the happy ones who have the benign aspect of the great God; and therefore the godly have ground to bear up cheerfully, having an interest in a kingly Friend, or a friendly King. "Let Israel rejoice in him that made him; let the children of Zion be joyful in their King," Psalm cxlix. 2.—*Crane.*

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The Eddystone Light-house.

ON LIGHTHOUSES—HISTORY OF THE EDDYSTONE LIGHTHOUSE.

The building of watch towers, now called lighthouses, had its rise in the earliest ages; and in several instances has been the object of royal munificence. The purpose of their erection is to exhibit a light, to warn seamen during the darkness of the night, of their approach to any sand, promontory, or insulated rock; as those on the South Foreland, Flamborough Head, the Eddystone rocks, etc.

The most celebrated structure of the kind among the ancients was the Pharos of Alexandria, which has been accounted one of the seven wonders of the world. This famous tower was built by the Ptolemies, kings of Egypt, and successors of Alexander; it is supposed to have been finished about 283 years before the Christian era, and had the name of Pharos, from the island, upon a rock at the eastern end of which it was built, so that its walls were washed by the sea. Its height is said to have been 547 feet, (English measure,) and a fire upon the top of it was constantly kept burning in the night, to light such ships as sailed near these dangerous coasts, which are said to be full of sands and shelves of rocks. According to Josephus, this light could be seen at the distance of three hundred stadia; that is, forty-one and a half English miles.

This magnificent structure, called even by Cesar wonderful, was the work of Sostratus, of Cnidus. And from the accounts which have descended to us of its great size, the durability of its materials, and of the substantial manner in which it was built, we might have reasonably expected it to be in existence at this day; but this is not the case: there is, indeed, still a lighthouse, but of a much more humble form, rising out of the midst of an irregular castle, or garrison, kept in this island, and which is now called Farion. Upon what occasion this famous building was destroyed, or met its destruction, history is, as far as we know, silent; but a writer of the twelfth century speaks of it, not only as a building subsisting in his time, but in perfect good condition: for he says, "There is nothing like it in the whole world, for the fineness of the edifice, or the strength of its structure; for, besides that it is built of the hardest Tiburtine stones, these stones are also joined together with melted lead, and so firmly connected, that they cannot be loosened

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from one another; for the sea beats against the very stones wherewith it is built on the north side."

As this stupendous work existed, either entire or in part, about five hundred years ago, it is evident that some extraordinary fate must have happened to it since that time; as its disappearance cannot be accounted for merely by the neglect of it. To have pulled it down would have been a work of so much labour, that even a wanton desire of destruction would have been foiled in the attempt; and it appears scarcely possible that its demolition could answer any useful purpose. Nor can we suppose that it has been undermined by the sea's gaining upon the rocks it was built upon, as those are said to be of granite. It seems therefore most likely, that it was destroyed by the shock of an earthquake, which at the same time produced a subsidence; as it has been stated by travellers, that the foundations or ruins of art are still seen among the rocks of the island on which it stood, under the surface of the water. At any rate, we have authentic testimony that this stupendous tower subsisted for a period of one thousand six hundred years.

From this lighthouse, as the most celebrated, structures of this kind have generally obtained the same name; as the Faro di Messina, and others. The most remarkable amongst the moderns, till the erection of the lighthouse on the Eddystone rocks off Plymouth, was the Tour de Cordovan, situated near the coast of France, upon a small island near the mouth of the river Garonne, in the Bay of Biscay. This lighthouse was begun two hundred and fifty-three years ago, in the reign of Henry II. of France; it occupied twenty-six years in building, and was finished in the reign of Henry IV., in the year 1610.

About fourteen miles S. S. W. of Plymouth Harbour, are situated a very dangerous cluster of rocks, called the Eddystone rocks, upon which many a fatal accident has happened, by ships, particularly those that were homeward bound, running upon them. In the sixteenth century, the erection of a lighthouse upon one of these rocks was considered very desirable for the benefit of the commerce of the country, but from their insulated position, their distance from the land, the heavy seas continually rolling over them, together with the circumstance of their being wholly immersed every high tide, presented difficulties which, for a time, appeared insurmountable.

In the year 1696, Mr. Henry Winstanley, of Littlebury, in Essex, undertook the erection of a lighthouse upon these dangerous rocks, and obtained the necessary powers to put it in execution.

Mr. Winstanley had previously distinguished himself in a certain branch of mechanics, the tendency of which is to raise wonder and surprise. He had at his house at Littlebury a set of contrivances, more curious than useful; and it appears that he had established a place of public exhibition, at Hyde Park corner, called Winstanley's Waterworks, which were mentioned in the *Tatler* of September, 1709.

The particulars of the erection of the lighthouse by Mr. Winstanley, was furnished by himself, together with views of the building, to Prince George of Denmark, then Lord High Admiral of England, of which the following extract is the commencement:—

"This lighthouse was begun to be built in the year 1696, and was more than four years in building: not for the greatness of the work, but for the difficulty and danger in getting backwards and forwards to the place; nothing being or could be left safe there for the first two years, but what was most thoroughly affixed to the rock, or the work, at a very extraordinary charge: and although nothing could be attempted to be done but in the summer season, yet the weather then, at times, would prove so bad, that for ten or fourteen days together the sea would be so raging about these rocks, caused by out-winds, and the running of the ground seas coming from the main ocean, that although the weather would seem, and be most calm in other places, yet here it would mount and fly more than two hundred feet, as has been so found since there was lodgment upon the place; and therefore all our works were constantly buried at those times, and exposed to the mercy of the seas; and no power was able to come near, to make good, or help any thing, as I have often experienced with my workmen in a boat in great danger; only having the satisfaction to see my work imperfectly at times, as the seas fell from it, at a mile or two distance; and this at the prime of the year, and no wind or ap-

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pearance of bad weather; yet trusting in God's assistance for a blessing on this undertaking, being for a general good, and receiving most inexpressible deliverances."

Then follows the account of Mr. Winstanley's proceedings during three summers, as they were unable to continue the work during each winter, it being impossible to pass and repass with the materials on account of the heavy seas which then prevailed. The lighthouse was sufficiently completed in November, 1698, to enable them to exhibit a light on the 14th of that month. And in the following spring, such alterations and additional strength were given to it, as the experience of the first winter suggested.

Mr. Winstanley's lighthouse, unlike the Pharos of Alexandria, was not of very long duration; and, from the construction of it, it would appear that it was not adapted to withstand the fury of the element by which it was surrounded. In November, 1703, Mr. Winstanley went down to Plymouth to superintend some repairs which the building required, and it is stated upon undoubted authority, that previous to going off with his workmen, some friends intimated to him the danger that one day or other the lighthouse would certainly be overset; he replied, "He was so very well assured of the strength of his building, he should only wish to be there in the greatest storm that ever blew under the face of the heavens, that he might see what effect it would have upon the structure."

Mr. Winstanley's wish was gratified in an awful manner. While he was there with his workmen and lightkeepers, that dreadful storm began, which raged the most violently upon the 26th of November, 1703, in the night; and of all the accounts of the kind with which history furnishes us, we have none that has exceeded this in Great Britain, or was more injurious or extensive in its devastation.

The next morning, when the violence of the storm was so much abated that it could be seen whether the lighthouse had suffered by it, nothing appeared standing; nor were any of the people or materials of the building ever found afterwards. And, it is stated in a work entitled, "The Storm," published in London the following year, that the lighthouse had not been long down, when the Winchelsea, an homeward bound Virginia ship, was split upon the rock where that building stood, and most of her men drowned.

The great utility that the lighthouse had proved itself to be of, during its short continuance, together with the loss of the Winchelsea and other ships, proved powerful incentives to awaken the attention of those most nearly concerned, to attempt the erection of another, the former building having demonstrated it to be a thing, however difficult, yet not in its own nature impossible or impracticable. It was not, however, till the year 1706, that powers were obtained for the commencement of the work, and Mr. John Rudyerd was engaged as engineer and surveyor. This gentleman was not bred to any mechanical business, or scientific profession, being at that time a silk mercer, who kept a shop upon Ludgate-hill, London; but having made these kind of studies his private amusement, he had well qualified himself for the important undertaking which was now committed to his charge, and of which he so ably acquitted himself.

The building which he erected was of wood, its form was the frustrum of a cone, surmounted by a lantern for the exhibition of the light; its figure was simple and elegant, unbroken by any projecting ornament, or any thing whereon the violence of the storms could lay hold; all the windows, shutters, and doors, were so constructed, that when shut, their outside formed a part of the general surface, like the port-holes in a ship's side, without making any unevenness or projection in the surface, so that the force of the sea striking it, passed off without injuring the building.

We have stated that the building was of wood; it was essentially so: but, in order to insure its stability, by increasing the gravity or weight of the lower part, it was built solid to the height of thirty-three feet above the rock; and as the door was consequently elevated, an iron ladder was placed for the purposes of egress and ingress; this solid part consisted of some layers, or courses of timber, and the rest of hard stone called in that part of the country "moor stone." The whole weight of stone thus introduced at the bottom of the building, amounted to two hundred and seventy tons, and may be considered in the nature of ballast. The whole height of this building, to the top of the

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ball which surmounted the lantern, was ninety-two feet, upon a base of twenty-three feet four inches.

The work was commenced in July, 1706, and was completed in 1709. It is stated, that during the progress of the work, Lewis XIV. being at war with England, a French privateer took the men at work upon the Eddystone rock, together with their tools, and carried them to France; and the captain was in expectation of a reward for his achievement. While the captives lay in prison, the transaction reached the ears of that monarch: he immediately ordered them to be released, and the captors to be put in their place; declaring, that though he was at war with England, he was not at war with mankind: he therefore directed the men to be sent back to their work with presents; observing, the Eddystone lighthouse was so situated, as to be of equal service to all nations having occasion to navigate the channel that divides France from England. Mr. Rudyerd has himself stated, that four ships of war were appointed at sundry times to that station, "to expedite the work, and to protect the workmen," which was probably in consequence of the accident above stated.

The building when thus completed, continued, with certain repairs, to answer all the purposes intended by its erection, till December, 1755, forty-six years after its completion, when it accidently caught fire in the upper part, and continued to burn downwards, driving the three attendants before the flames, from room to room, till they were obliged to quit the building, and take refuge in a hole in the rock, it being then low water, from whence they were providentially rescued before the returning tide swept them to a watery grave. The flames had been discovered from the shore early next morning, and a boat put off to render the assistance required. One of the three men, as soon as he was landed, ran away, and was not again heard of at Plymouth, fear having taken complete possession of his faculties; another having been much injured by the melted lead, which flowed over his face and down his throat, died a few days afterwards. Thus was destroyed the second Eddystone lighthouse, which, but for the fire, bade fair to withstand the raging of the winds, and the sea for a long period of years.

We must next give an account of that beautiful building subsequently erected on the same rock, by Mr. Smeaton, and which is represented in the engraving at the head of this article. This building is not only beautiful in the symmetry of its figure, but its stability appears to be as great as the rock on which it stands.

Mr. Smeaton's first interview with the managing proprietor, Mr. Weston, took place on February 23, 1756; when having received instructions to prepare the necessary designs for a new erection, he set about his task with such earnestness and ability, that he very soon had the outline to lay before his employers, of the building which has for seventy-eight years withstood the raging of the winds and waves, and been, through the blessing of an Almighty Providence, the means of preserving many a ship's crew from perishing on those dangerous rocks.

The building is entirely of stone, fitted together by the dove-tailing of each of its parts, by which every course of stone may be considered as one piece, and the whole cemented together forms one mass. Its height is eighty-seven feet to the ball surmounting the lantern, and its width at the base is twenty-six feet. The building was completed, and the light first exhibited, on October 16, 1759. The management of the light is intrusted to three men; two only were employed for this service during the existence of the first, and early part of that of the second lighthouse; but in consequence of the following occurrence, a third attendant was engaged. It happened that one of the two men was taken ill and died, and notwithstanding the Eddystone flag (the signal for help) was hoisted, yet the weather was such for some time, as to prevent any boat from getting so near the rocks as to speak to them. In this dilemma, the living man found himself in an awkward situation; being apprehensive that if he tumbled the dead body into the sea, which was the only way in his power to dispose of it, he might be charged with murder; this induced him for some time to let the corpse remain, in hopes that the boat might be able to land some person to relieve him from his distress; but it was nearly a month before the weather permitted a landing, and the body by this time was so far decomposed, as to render its removal difficult. This induced the proprietors to employ a third man, that in case of a

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future occurrence of the same nature, or the sickness of either, there might be constantly one to supply the place. This regulation also afforded a seasonable relief to the lightkeepers; for since there were three, it has been a rule, that in the summer, in their turns, they are permitted each to go on shore, and spend a month among their friends and acquaintance.

It may be a matter of surprise how persons can be found, who are content, for a salary only amounting to the wages of a day-labourer, to give up their liberty, and live an isolated life, as lightkeepers, upon the Eddystone rocks: they are, however, for the most part, men who have passed the prime of life, and having still to earn their bread by their own labour, find this an easy employment. But to show how different are the ideas of mankind, concerning the nature of confinement, we relate the following anecdote, which occurred some time before Mr. Rudyerd's lighthouse was burned down. "Says the master to a shoemaker in his boat, who he was carrying out to be a lightkeeper, How happens it, friend Jacob, that you should choose to go out to be a lightkeeper, when you can, on shore, as I am told, earn your half-a-crown and three shillings a day in making leathern hose, whereas the lightkeepers' salary is scarcely ten shillings a week?' Says the shoemaker, 'I go to be a lightkeeper, because I do not like confinement.' After this answer had produced its share of merriment, he at last explained himself, by saying, that he did not like to be confined to work."

BOOBIES, AND MEN-OF-WAR BIRDS.

The British sailors have given the appellation of *Booby*, and the French the corresponding term *Fou*, to the gannet, (genus *Sula*, Briss.) in consequence of the stupid indifference manifested by these birds on the approach of man, whom they permit even to assault them, without endeavouring to escape. On the contrary, the man-of-war, or frigate-bird, (*Tachypetes aquila*,) appears to have gained its names from the ferocity of its disposition, which leads it to attack its oceanic compeers, in order to appropriate to itself the fruits of their industry. Its falcon-like manners and general appearance are alluded to in the specific term *aquila*, (eagle,) which has been applied to it.

To commence with the gannets, we may observe, that the genus *Sula* contains eight or nine species, of which only one is a native of Europe, namely, the solan gannet, or solan goose, (*Sula bassana*, Briss,) a bird of passage, annually visiting the Bass Rock, the Isle of Ailsa, St. Kilda, and similar places, in vast multitudes, for the purpose of incubation.

In the southern ocean, the Islands of Ascension, St. Helena, Tristan d'Acunha, etc., are the resort of several species peculiar to the southern hemisphere; where the appearance of flocks of these birds engaged in fishing, gives notice of the proximity of land.

By modern ornithologists, the genus *Sula* is placed in the family *Pelecanidæ*, a family of the swimming order, and containing the pelican, the cormorant, the darter, the frigate-bird, and many others. In all the members of the family *Pelecanidæ*, the beak is more or less denuded of feathers at the base; the nostrils are mere slits, not very perceptible; the skin of the throat is more or less capable of being dilated; the tongue is very small; the toes are four in number, all connected together by webs, that which is properly the hind toe having an obliquely forward direction; the beak varies in form, but it is strong, and longer than the head in all.

With respect to the restricted genus *Sula*, it is "characterized by a long bill, which is thick at the base, and tapers gradually to a sharp point, constituting a formidable weapon. Beneath the under mandible the skin is naked and dilatable, and the edges of the upper are furrowed with teeth directed backwards, resembling those of a fine saw; the face is naked; the wings are long and pointed; the tail is graduated; the four toes are all connected together by webs; and the claw of the middle toe is pectinated, as in the heron." Gifted with unwearied powers of flight, the birds of this genus are incessantly soaring over the ocean, eagerly surveying its glassy surface in quest of fish, upon which they dart from their elevation with amazing velocity. They do not dive, strictly speaking, nor are they expert as swimmers, seldom indeed resting on the water, where, when they do alight, they float without using any exertion. During the breeding season they assemble together in large flocks,

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and take up their quarters on the most precipitous rocks which overhang the deep. They lay but one egg, and the young are nearly four years in acquiring the full plumage of maturity." (See Introd. to Study of Birds, p. 569.)

The habits and manners of the southern gannets doubtless agree very closely with those of our British species. In the European seas, however, the gannet is exempt from the persecutions of an enemy, by which it is greatly harassed in the inter-tropical ocean; we allude to the man-of-war bird, which subsists in a great measure upon the labours of this active and industrious fisher. The man-of-war bird is indeed one of the extortioners of the feathered tribes, and lives a life of plunder and oppression; not that it does not fish for itself, but it eagerly ayails itself of the opportunity of depriving other fishing birds of their booty, and especially the gannet, which seems, probably on account of its success in fishing, to be a marked victim.

The mode in which the man-of-war bird forces the gannet to deliver up his booty, puts us in mind of the manœuvre practised by the white-headed eagle,* in order to obtain the fish which the industrious osprey has captured. In both cases might prevails over right, and the weaker yields to the more powerful. "To attain his object," says a writer who describes from actual observation, "the man-of-war bird hovers above the gannet, and darting rapidly down, strikes him on the back of the head, causing him to disgorge his prey, which is seized by the man-of-war bird with inconceivable rapidity, before it reaches the water; he then soars aloft to look out for another object of attack. It is not an uncommon circumstance to observe a single gannet selected from a flock, and come out† to be the subject of attack, as if he had been called by the man-of-war bird in preference to the others. The gannet, however, does his best to avoid the blow, by lowering himself at every dart of his enemy, and raising his pointed beak in a perpendicular direction to receive him; by these means it frequently eludes the repeated blows of its antagonist, and both fall into the water together, where the gannet having the advantage, usually escapes."

At the Island of Ascension, where these birds are common, a gentleman, who had seen the gannet disgorge its fish when struck on the head by the man-of-war bird, tried an experiment to the same effect; visiting the part of the island termed "The fair," where these birds congregate in great numbers, he struck some of them with a cane on the back of the head, when the disgorgement of the fish they had swallowed immediately took place.

With respect to the species of gannet peculiar to the Southern Ocean, some degree of confusion appears to exist, partly on account of the changes of plumage to which all the species are probably liable, (a circumstance which is likely to mislead as to specific identity,) and partly from the vague descriptions of voyagers. As an instance of the latter, we may mention the bird termed by Latham (see vol. x. p. 440) Tuckey's Booby, of which the description rests on Capt. Tuckey's description in his narrative:—"These birds were met with by Captain Tuckey in his voyage not far from the African coast, near Prince's Island, having settled on the yards of the ship in the dusk of the evening; and though the circumstance frequently occurred, only two specimens (viz., those from which the description was taken) were captured. They were observed generally in pairs, and flying close to the water with the neck stretched out, and the tail spread." Plumage, rusty brown-quill; feathers black; crown of head dove-coloured.

A more definite species is the lesser gannet, (*Sula candida*, Briss. *Sula piscator*,) of which we have seen (as we regard it) a specimen in the museum of the Zoological Society. This species is very widely dispersed. It is said to be common in the Isle of Ascension; it is also found in China and New Holland. Its general colour (in maturity) is white, except the greater wings, coverts, and quill-feathers, which are black; the scapulars are also black at the ends; the tail is black, except at the base, which is white; naked skin of throat black; bill dull red; legs red. It is probable that the bird from New Holland may prove to be distinct.

We have also seen a closely allied species, differing, however, from *S. piscator*, in being of a larger size, also in other details; it was obtained in the Southern Ocean, and appears to be as yet undescribed.

* See "Visitor," for 1837, page 101.

† Attacked, most probably, because he separates from the rest.

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Another species, found on the coast of Africa, as well as in other parts of the globe south of the equator, is the brown booby, (*Sula fusca.*) The general colour of this bird is cinereous brown, paler on the under parts.

It will be very evident from what we have said, that when alluding to "the booby," voyagers are using a general term, including in it several allied species, and applicable to all alike, inasmuch as their habits and manners are precisely the same. Among the great group of fishing birds, these are pre-eminent for skill; and the destruction they occasion among the finny tribe is enormous. Latham, speaking of our British gannet, quotes a statement from Buchanan's View of the Fishery of Great Britain, in which an estimate is formed of the havoc they commit; observing that herrings and mackerel are their favourite food, he says, "100,000 of these birds are supposed to be round the rocks of St. Kilda, which is far too moderate an estimate, as 20,000 of them are annually killed for food, including the young ones; we shall suppose that the Soland goose (gannet) sojourns in these seas for about seven months in the year, and that each of them destroys five herrings a day, a subsistence by no means adequate to so greedy a creature, unless more than half supported by other fish, there we have 105,000,000 of the finest fishes devoured every year by one species of the birds which make St. Kilda their resort."

It is interesting to compare the mode in which the gannet carries on its fishing operations, with those of other oceanic birds. The penguin and the great awk, incapable of flight, dive in pursuit of their prey, and using their paddle-like wings, as well as their feet, follow it in the depths of the sea; the cormorant, endowed with considerable powers of flight, is no less endowed for sub-aquatic than for aërial progression; the body in swimming is half immerged, the tail acting the part of a rudder; it dives with surprising rapidity, and its motions are sudden and impetuous; having selected its victim, it pursues the fated object with the velocity of an arrow, and seldom suffers it to escape. It is essentially a diving bird, as are also the grebes and the divers, (*colymbus.*) Not so the gannet; it does not pursue its prey, chasing it as a greyhound chases a hare, but plunges down upon the fish as it rises to the surface, or near the surface of the water. When in quest of food, it sails at some elevation in the air, watching with keen eyes the movements of the shoals below, the numbers of which it is destined to thin; it marks them rise till they glisten in the light, when, sudden and rapid as an arrow, down it sweeps, burying itself in the water; instantly, however, it again emerges with its prize, and again sails around as before. The violence with which the gannet descends, as it darts upon its prey, may be conceived from the circumstance, that it has been taken, by means of a fish fastened to a board, and sunk to the depth of even two fathoms; in which case either the neck of the bird has been dislocated by the concussion, or its sharp hard bill has been fixed firmly in the wood. Against such a foe as the gannet the flying fish has but little chance; it is a fish which always swims superficially, and is perpetually taking forced flights in the air; it is indeed an easy prey to birds far less rapid and impetuous than the gannet.

In the lonely islands of the Southern Ocean the gannet permits man to approach it without attempting to escape; and our British species, while sitting on its egg, will allow itself to be approached and stroked by the hand, without offering any resistance, or manifesting any fear. It is right, however, to observe, that on the Bass Rock, on St. Kilda, and other places, the gannet is not molested during the season of incubation, as it is an object with the proprietors of its haunts to protect the flock from any annoyance. The young, while yet clothed with down, are taken, both for the sake of their covering and their flesh. The Bass Rock, on this account, solely, rents from 60*l.* to 70*l.* per annum; and the profit is very considerable. Other breeding stations are also valuable.

To the Edinburgh market vast numbers of young gannets are annually sent, selling on an average at 1*s.* 8*d.* each; the flesh, though oily, is in great estimation as a sort of relish before dinner. In some places the bodies of young gannets, dried, form the staple winter consumption of the inhabitants. Latham states, that "the inhabitants of St. Kilda consume annually no less than 22,600 young birds, besides an amazing number of eggs."

Unlike the gannets in one respect, the

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man-of-war or frigate-bird (*Tachypetes aquila*, Vieill) has no European representative, but is chiefly, if not exclusively, limited to inter-tropical latitudes, where it is often seen at a considerable distance from land. In form, contour, and habits, it strongly reminds us of the falcon tribe; and though deriving its food from the stores of ocean, it is incapable of diving and swimming, and never, or very rarely, even rests on the surface of the deep. Its feet are indeed webbed; but the webs are very partial, and the tarsi are short; the legs are feeble, and covered to the toes with long loose feathers. The tail is long and forked; the wings are of vast extent; the beak is long, powerful, and hooked at the tip; beneath the throat is a large pouch, (most remarkable in the male,) capable of being distended with air, and which is regarded by most naturalists as an apparatus aiding the bird in its flight. The skin which covers the distended sack externally is destitute of feathers, and of a deep red colour. The diminutive size and feebleness of the legs rendering the frigate bird incapable of making any progress on the water, equally disqualify it for exercise on shore; there, encumbered by its vast wings, which it cannot readily bring into vigorous action, (as is the case with the swift, on a level surface,) it is obliged to scramble to the edge of a cliff or the point of a rock, before it can launch itself into the air, where, and where alone, it is in its congenial element. Mr. Burton, in his paper on the natural history of the *Pelecanus aquilus*, Lin., *Tachypetes aquila*, Vieill, (Vide Lin. Trans, vol. iii. p. 5,) observes, that besides sweeping off fish and other matters floating on the surface of the water, which it does, as it darts along with the greatest velocity, it has another mode of supplying itself with food. "It is seen accompanying flocks of sea birds, chiefly the *Pelecanus*, (*Sula*,) *Piscator*; as soon as these have dived (plunged) after fish, and begin to ascend with the prey in their beak, it attacks them, and seizes what they have taken. Wherever a number of these birds are collected in or near the water, they are invariably accompanied by some frigate birds, which hover directly over them, and follow them in their flight. Their food (that is, of the frigate birds) consists almost entirely of fish, and chiefly of the *Exocetus volitans*, or flying fish, which are the most accessible to them; though they probably occasionally feed on such of the *mollusca* as come within their reach, and will also seize pieces of pork, fowls' entrails, or any animal substance thrown to them. A young one covered with down, without any appearance of feathers, except the primaries of the wings, and unable to move, when taken, disgorged seven flying fish; and the stomach and intestines of all those opened were full of the bones of small fish." Like the gannet, the female frigate bird lays only one egg; it builds both on trees, and on the ledges of steep precipices; but in the latter case it makes little or no nest. The length of the frigate bird is about three feet, the extent of the expanded wings, seven. For further details respecting the history and the affinities of this remarkable bird, we refer our readers to the *Weekly Visitor* for 1833, p. 20, where an accurate sketch from nature accompanies the description. M.

SEPTEMBER FLOWERS AND PLANTS.

Plants in Flower.

WILD.

Orpine, *Sedum telephium*
Umbelled hawkweed, *Hieracium umbellatum*
Harvest bell, *Campanula rotundifolia*
Autumnal hyacinth, *Scilla autumnalis*
Meadow sweet, *Spiræa ulmaria*
Red valerian, *Centhranthera rubra*
Golden rod, *Solidago virg-aurea*
Ploughman's spikenard, *Conyza squarrosa*
Autumnal dandelion, *Leontodon autumnale*

CULTIVATED.

Buck wheat, *Polygonum fagopyrum*
Amarella, *Gentiana amarella*
Lady's fringes, *Gentiana ciliata*
Worled coreopsis, *Coreopsis verticillata*
Rose feverfew, *Pyrethrum rosea*
Michaelmas daisy, *Aster Tradescanti*
Italian pimpernel, *Anagallis Monelli*
Garden dahlia, *Dahlia hybrida*
Pinnate dahlia, *Dahlia pinnata*
Sinate rose, *Rosa Sinensis*
Clary, *Salvia sclarea*
Mountain geum, *Sieversia montana*

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WILD.

Ladies' traces, *Ophrys spiralis*
Honeysuckle, *Lonicera Periclymenum*
Bramble, *Rubus corylifolius*
Musk thistle, *Carduus nutans*
Eye-bright, *Euphrasia officinalis*
Heath-bell, *Erica tetralix*
Musk mallow, *Malva moschata*
Soap wort, *Saponaria officinalis*
Chickweed, *Alsine media.*

CULTIVATED.

Purple abyssum, *Aubretia deltoidea*
Tiger flower, *Tigridia pavonia*
Changeable colchicum, *Colchicum versicolor*
Scarlet bouvardia, *Bouvardia triphylla*
Southern-wood, *Artemisia abrotanum*
Musk rose, *Rosa moschata*
Slender fushcia, *Fushcia gracilis*
Balsam, *Impatiens balsamnia.*

THE more gay season of summer, and a portion of joyous autumn are now over, and the year begins rapidly to wane with the shortening of the days, and the increasing cold of the nights. The summer birds which cheered us with their songs—the white-throat, the blackcap, the nightingale, and the twittering swallow, are now either gone, or preparing for their passage, to warmer climes, to spend the winter. Also the flowers of summer, which we contemplated in their beauty, and meditated on the power and the benevolence of the great Creator, in adorning them with colours and splendour surpassing "Solomon in all his glory," have, for the greater part, disappeared from the fields and gardens, giving place to others of various characters and qualities. The faded and vanished flowers, however, leave behind them, in their seeds, and the diffusion thereof, an inexhaustible subject for meditation and wonder, to cause us to exclaim at every step, that the earth is full of the glory of the Lord. In the words of our rural poet, John Clare,

> "All nature owns with one accord
> The great and universal Lord,
> Insect, and bud, and tree, and flower,
> Bear witness to his wondrous power;
> And, 'God is with us,' all reply,
> Creatures that creep, walk, swim, or fly,
> God reigns on earth, in air, in sky."
>
> THE DEITY.

One thing very remarkable, which must strike the attention of the meditative botanist in his walks, is the immense profusion of seeds beyond what appears necessary for the continuance of the species of individual plants. But it does not appear that the continuance of the species is the sole design of all-wise Providence, in producing them so abundantly. Many of the smaller animals feed on seeds, no less than we do on certain fruits, and sometimes great benefit arises to the husbandman from the unseen operations of tiny creatures, whose existence he may not even suspect, of which the writer will give a singular instance that occurred under his own observation.

Being desirous of making a collection of the seeds of various thistles, to sow in a garden, for the sake of experiment and curiosity, the writer collected, during an extensive tour on the continent, a very great number of heads of seemingly ripe seed, which he met with by the road-sides. These he did not, in his haste, examine very minutely, till after his return to England; but what was his disappointment to find, that the thistle heads which seemed the largest and best ripened, judging merely from their external appearance, seldom contained a single seed fit to be sown. The grubs of a small species of fly had been so numerously hatched in the thistle-heads, that they had devoured almost every seed, their appropriate food, and left nothing but the husks. From this circumstance, we may observe, that thistles having, by means of their down, an extraordinary facility of being diffused; if the leaves were all permitted to ripen, they might soon multiply to so great an extent, as to occupy much of the space required for more valuable plants; while the fields cultivated with corn, and the gardens with vegetables and fruits, would be overrun with these plants, so unprofitable to man, though, as we have seen, carefully sought after by the fly, whose grubs feed on the seeds, as the ass does on the leaves; nothing being created by God in vain, but all being adapted to the wants of one or more of the animated creation.

The thistle-down, or as Ossian terms it, the "thistle's beard," is attached to the summit of the seed, which, in some species, such as the milk thistle, (*Carduus marianus*,) is rather heavy, as a car is attached to a balloon, or any

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object to a parachute. The down is sufficient, however, in the case of the weightest seeds, to float them to some distance from the parent plant, having for the most part the advantage of a height of two or three feet to start from. The direction, and the distance of the flight of the down-suspended thistle-seed, must of course depend on the state of the wind; but sooner or later, the gravity of the seed attached to its downy balloon, or parachute, brings it to the ground, and that, it is worthy of remark, always in a position perpendicular to the surface of the soil where it may chance to fall. This perpendicularity enables the seed to insinuate its thinnest end into any chink or crevice in the soil; and the washing of rains, or the accidental tread of animals, fixes it in the soil, where it meets with moisture, and germinates.

In the case of chickweed, (*Alsine media*,) groundsel, (*Senecio vulgaris*,) shepherd's purse, (*Thlaspi Bursa Pastoris*,) and such like plants, the immense production of seeds is in part kept under by their being the natural food of birds; and at this season the seed-eating birds (*Graminivoræ*) congregate in flocks, and devour very great quantities of seeds wherever they can find them, in pastures, stubble fields, and sometimes even in gardens.

The mode in which the seeds of the thistle are diffused, affords a very beautiful illustration of the wisdom of the great Creator in adapting means to an end; but this end, namely, the diffusion of seeds, is very various in different sorts of plants. A very remarkable one occurs in those plants, such as the balsam, (*Impatiens balsamina*,) which throw their seeds to a distance by means of a spring. The common corn violet, (*Viola arvensis*,) and the garden heart's-ease, (*V. hybrida*,) exhibit a very wonderful mechanism of this kind.

The seeds of these annual or sub-annual violets are contained in an oblong angular pod or capsule of a single chamber, (*loculamentum*,) consisting of three valves, that is, the shell of each pod is composed of three pieces, equal or nearly so. Along the inner part of each valve the seeds are attached, and remain so for some time after the valves, in the process of ripening, have separated and stood open. In consequence of the heat of the sun, the sides of each valve shrink and collapse; and in this state the hard and very smooth edges of the valve press firmly upon the seeds, which, from being before apparently irregular in arrangement, come into a straight line. Like the edges of the valve, the seeds, it may be remarked, are not only extremely smooth, polished, and shining, but regularly egg-shaped, so that when pressed upon by the hard, collapsing edge of the valve, it slides gradually down the sloping part of the seed, and throws it with a jerk to a considerable distance.

This is not all: there is another part of the mechanism for the purpose of assisting the diffusion which is worthy of the attention of the meditative botanist. Before the seed is ripe, the capsule or pod hangs in a drooping position, with the persistent cup (*calyx*) spread over it like an umbrella, to guard it from the moisture of rains and dews, which would retard the process of ripening; but no sooner is the ripening completed than the capsule becomes upright with the cup for its support. This upright position is no doubt intended by an all-wise Providence to give more effect to the valvular mechanism for scattering the seeds, as it thus gains a higher elevation of an inch or more from which to project them; and this, according to the laws of projectiles, will give it a very considerable increase of horizontal extent. The seeds are in fact thrown by these means to the distance of several feet from the plant.

On comparing the annual and sub-annual species of violets, which thus project their seeds to a distance, with the perennial creeping species, nothing is more remarkable than the difference of the two in shedding their ripe seeds. The creeping sorts, such as the sweet violet, (*Viola odorata*,) being furnished in their offset runners with the means of escape from the soil, deteriorated or exhausted by the mother plant, they have not in addition to this means any mechanism for scattering their seeds. They have indeed the same chamber, (*loculamentum*,) with its three valves; but these valves do not collapse upon the ripe seed in order to throw it to a distance, and if they did, the distance would be necessarily small, from their not having, like the other, any mechanism for elevating the capsule, which usually hangs near the ground. Moreover, the first flowers of the creeping violets, so much admired for their fragrance, are

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rarely productive of seed at all; and it is only the flowers which are produced in summer, nearly without petals, and rarely seen or remarked, that are productive of seeds; perhaps because in very hot dry weather, the whole plants, runners and all, being very liable to wither and perish, the seeds are only then produced that the species may not thereby be altogether lost.

Amongst the floral beauties of this month we ought not to omit the harvest-bell or harebell, (*Campanula rotundifolia*,) which, though it begins to blow a month or two earlier, continues to put forth its delicate blue blossoms even later than the present month. The specific name round-leaved, (*rotundifolia*,) given to the plant by Linnæus, is by no means happily chosen, and is apt to puzzle a young botanist exceedingly; for though the leaves nearest the root are round, these usually soon wither off, and are rarely to be found, while all the other leaves are not round, but long and ligular. Sir Walter Scott introduces this pretty flower in a description of an elegant lady:—

"A foot more light, a step more true,
Ne'er from the wild flower dash'd the dew;
Even the light harebell raised its head
Elastic from her airy tread."

A living poet, Mr. Moir, has thus described the flower with great minuteness and felicity:—

"Bluebell of Scotland, to my gaze
As memory wandering through the maze
Of silent half-forgotten things,
A thousand sweet imaginings
Thou conjurest up. * * *
As when my heart first turned to thee,
Lifting thy cup, a lucid gem,
Upon its slender emerald stem,
Again I feel a careless boy,
Roaming the daisied world with joy.
* * * * *
But I am changed, yet thou art still
The same bright blossom of the hill,
Catching within thy cup of blue
The summer light and evening dew.
* * * * *
Still what of yore thou wert to me,
Blithe boyhood seeks and finds in thee."
THE HAREBELL.

The effect of cultivation may be strikingly exhibited in this pretty flower. Trials have often been made to transplant it into the garden without success; but by sowing some seed which was gathered by the wall of the old monastery of the Kreuzberg on the Rhine, the writer at length procured a fine plant. This is now two years old, and instead of the small tiny plant of the heath or the common, though it is growing in nearly pure sand, it has about a dozen strong stems two feet high, each full of blossoms. As it will grow with the smallest portion of soil, it is excellent for ornamenting the tops of walls, ornamental rockwork, and the like, where, however, it will not succeed well except by sowing the seeds.

Another beautiful flower commonly grown in such places, or in pots for the window, is the trailing snapdragon, (*Antirrhinum Cymbalaria*,) whose pretty leaves and delicate blossoms, always blooming in great profusion, render it a universal favourite. This also is difficult to preserve by transplanting, though it grows so readily from seed that it soon becomes too common, and spreads as a weed all over the garden.

The bell heath (*Erica tetralix*) is one of our prettiest wild flowers, and though rather small when compared with the showy Cape heaths, it is well worthy of being cultivated in the flower-garden, or even in the greenhouse. The truss of the blossom is not unlike in form that of the sea-pink or thrift, (*Statice Armeria*,) but more delicate in colour. A modern poet thus alludes to this pretty flower:—

"The rustic blushing heath,
That lurks the fern beneath,
Should grace our wilding wreath
With many a pendent bell.
WILD FLOWER WREATH.

The dahlia is now the chief ornament of the gardens, and a splendid show it makes with its endless variety of colours and forms, from the darkest purplish brown to the purest white. The original dahlias, (so called from the Swedish botanist M. Dahl,) are natives of Mexico, where two species (*D. coccinea* and *D. variabilis*) are found wild. By the improvements of cultivation and intercrossing these artificially, all the varieties of the gardens have been produced. Only a very few years ago no double dahlias were known, but now the double ones have so increased in favour with flower-growers, that it is rare at present to meet with a single one.

The artificial crossing, which was at first extensively practised, is still had recourse to in instances where very fine sorts are in request, but it is by no means indispensable in procuring varieties. When flowers have once been crossed, the seed which they produce has a strong tendency to give origin to varieties, as if efforts were made by each plant to return to the original form and

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colour. With regard to the dahlia, accordingly, it is stated, that Mr. Lord, of Bury St. Edmunds, from sowing the seeds of the shaded rose-coloured one named Douglas's Augusta, procured varieties of more than a dozen colours, namely, striped red, dark crimson, deep lilac, rose red, light crimson, shaded crimson, light scarlet, purple, maroon, bright crimson, buff, dark red, &c. From the seeds of the variety named the Scarlet Turban, Mr. Lord procured various shades of red, scarlet, crimson, and lilac; and from the variety named *Coccinea superba*, he procured varieties of crimson, purple, red, scarlet, orange, light lilac, and dark crimson. Similar results have, in hundreds of instances, been produced by the experiments of other florists. J. R.

THE VISIT TO THE HALL.

MARY.—What a while you have been up at the hall, Roger! I am afraid that you have done no good with the squire. I am afraid that he won't lower the rent, after all.

Roger.—You are right enough there, not one farthing will he bate me. Never did I see a man in such a tantrum. He told me that the steward had been too easy with me by half, and that instead of lowering the rent of the cottage, he ought to put on another pound or two, at least.

Mary.—Another pound or two! where does he think poor people like us are to get the money from?

Roger.—We are poor enough, that's certain; but to tell you one bit of honest truth, I take it that, after all, we are richer than the squire.

Mary.—Fine talking, Roger! You're getting into one of your high-flying fits again. Here we don't know which way to turn, to scrape up money enough to pay the rent of the cottage, and you talk of our being richer than the squire, who almost rolls in money!

Roger.—If it had not been for illness, we should have paid the rent to the day, as we always have done; but when it pleases God to take the strength out of a man's arm, he can't work, let his heart be ever so willing. I'll tell you, Mary, about my call on the squire, and then, mayhap, you will say that I am not so wide of the mark as you think for.

Mary.—Ay, tell me all about it, though it will be but cold comfort if we are to have nothing taken off the rent.

Roger.—It's a fine thing, no doubt, to be a squire, and to have great estates, and bags of money, and a carriage, and lots of servants in fine coats and white cotton stockings; but I never felt half so thankful as I do now, that I am a hard-working, labouring man, and no squire.

Mary.—If you are thankful for hard work, you're likely to have enough of it; for unless there be hard work, and a good deal of it too, there's no chance of our getting out of debt for a long while. There's the doctor's bill, and the two pounds we borrowed from Mrs. Price, besides the rent, and the squire says that we ought to be raised, does he? Ah, he is a hard one! He does not know what it is to work for a bit of bread, or he would not talk in that fashion; but he may know it yet, for many a high tree is blown down by the wind.

Roger.—Well, listen to me. Just before I got up to the hall, who should I meet but the head footman; he is always very civil to me. "How are you, Roger?" says he. "Why," says I, "I am heart well, thank God for his goodness, but in a bit of trouble about my rent." "Why," says he, "what's the matter? Your sickness has thrown you back, I suppose; you look but weakly even now." "True," says I, "but every day I get stronger; the steward has been a little hard upon me, and so my wife thought that, mayhap, I might do better in speaking to the squire himself." "You are come at a bad time, Roger," says he, "for master has had a loss that has sorely vexed him. One of his hunters has been kicked this morning in the meadow, and he'll never be fit for any thing again as long as he lives."

Mary.—You should have come back again directly, when you heard that.

Roger.—I should have been glad enough to have done that, for my heart sadly failed me; but then I knew if I did, that the steward would call again in the morning. While I was talking with the footman, up comes the coachman, and said that an accident had happened to the carriage, one of the panels had been broken in, and he knew that his master would be half-mad about it. "Well," thinks I, "I'll see him if I

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can before he knows any thing about it."

Mary.—That was right enough.

Roger.—The hall is a grand place, and I felt rather shivering-like when I got up to it, for I never was inside the door of it before. If we feared God more, and man less, it would be a deal better for us all, and so I thought then, for the words of Scripture came into my mind, "Who art thou, that thou shouldest be afraid of a man that shall die, and of the son of man which shall be made as grass; and forgettest the Lord thy Maker, that hath stretched forth the heavens, and laid the foundations of the earth?" Often have I found a comforting text of Scripture bolster me up bravely; but I can't say but what I felt afraid of the squire. I went in the back way, and was told to stand in the great hall. It happened that the door of the room where the squire was sitting reading the newspaper, was a little ajar, so I heard every word he spoke. He read up loud, that Madam might hear, I suppose, and presently he came to an account of a ship at sea that had gone to the bottom. He stormed about it long enough, and said that he should lose hundreds of pounds by it; but not a word did he say about the poor sailors. "Well," thinks I to myself, "I am glad I have nothing to do in ships at sea, any how. Soon after he read an account of a bill being thrown out in parliament. As far as I understood it, it was a bill about a railroad that he wanted to become the law of the land, because it would have made his property round about worth double as much as it is now. How he did fret and stew! Thinks I, "He is a deal more unhappy about what he can't get, than thankful for what it has pleased God of his goodness to give him. I am heartily glad that Roger Dunn has nothing to do with railroads and bills of parliament." By this time it seemed to me that the steward was quite as kind-hearted a man as his master, and that I had only jumped out of the frying-pan into the fire.

Mary.—It seems odd to me that you did not come away. I should have run for my life, when I knew the squire was in such a passion.

Roger.—I might think of running, but it was too late to run in reality, for the servants would have thought that I had stolen something out of the hall. While I was standing there, a letter was taken into the parlour, and the squire read it up the same as he did the newspaper. It told him that coal had been found in a part of one of his estates, which would be a great advantage to him. I don't know whether he was thankful or not, but none of his words showed that he was, for he still kept fuming about the act of parliament. Well, the squire had another dose to come yet, worse than all the rest; for, in turning over the paper, he came to the account of a thing he little looked for—the bank had broken where he keeps his money.

Mary.—The bank! why, he'll be ruined then.

Roger.—Oh not he, he's money enough beside what he puts in the bank, but it seemed to come upon him like a clap of thunder; he dashes down the paper, rings the bell, and orders his carriage. When the footman told him about the broken panel, I thought he would have gone beside himself. Up he jumps.

Mary.—You should have got out of his way.

Roger.—So I was trying to do. I squeezed myself up on one side, hoping that he would go on, and never see me; but his eyes are sharp enough. At first I do think he took me for a thief. He came up to me like a lion, and asked me what I wanted; then he began to storm. He would hardly hear me speak a word, and when he did hear me, he cut me short in saying, that the rent was too low by pounds, and that the steward was not doing his duty by him.

Mary.—Did you speak again to him?

Roger.—I had no words to throw away, for they seemed to stick in my throat; but while I was stuttering and stammering, the footman in carrying out the breakfast things, frightened, I suppose, half out of his life, by his master's tantrums, let the tea-board slip, and down comes all the china, slap on the hall-pavement.

Mary.—What, all the china! why that job will cost pounds and pounds.

Roger.—Ay, so it may, but every penny of it is to be paid by the footman. Poor fellow, he was as pale as a sheet. Madam came out of the parlour, and the servants came running, some downstairs, and some up out of the under-kitchen. The squire raved among them like a bedlamite; and I was right glad to slip out at the back door, for I never drew a free breath till I got clear off the premises.

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Mary.—I should not wonder a bit if the squire comes to the dogs yet; poverty would bring down his proud heart, and make him feel for other people. There is no hope now, of having our rent lowered, and yet you don't seem cast down about the matter.

Roger.—No, I don't, Mary; for I feel so thankful that I am no squire, driven half-mad by hunters, and shipwrecks, and railroads, and banks breaking, and broken china, that I seem equal to any thing. If it should please God to give me my health, and to keep up my resolution, for without his goodness and grace I can do nothing, why I'll work harder than ever. This visit to the hall has done me good. It has shown me how little riches can do of themselves to make a man happy. Peace of mind is worth more than all the gold that ever was dug out of the earth.

Mary.—I am glad to see that you have a good heart of it; but how are we to manage with the steward about the rent?

Roger.—How we shall rub through I can't exactly tell, though a happy thought has just popped into my head, that I'll tell you about by-and-by. There's a precious verse or two in the Psalms that will just suit us now. "Delight thyself also in the Lord; and he shall give thee the desires of thy heart. Commit thy way unto the Lord; trust also in him; and he shall bring it to pass." We can't do better, Mary, than commit ourselves, and all our crosses, into His merciful hands, for he will do what is right concerning us. I now fear neither the steward nor the squire, and though I can't tell why, my heart is as light as a feather.

Mary.—You seem in such spirits, that I am getting lighthearted too; work as hard as you will, your wife shall be but little behind-hand with you. I begin to be of your way of thinking, that the squire is not so rich, nor we so poor, as I thought.

Roger.—We shall do, Mary, never fear; when husband and wife pull together, when they do their best; knowing that when they have done all, they owe every thing to God's grace, they may safely trust his good providence.

OLD HUMPHREY ON TRACTS.

'Tis an excellent thing, in going through the world, to know for what we are fit; this knowledge is of very extensive use, and the want of it leads to very great irregularity.

Some men appear made for their position, so much so, that if, in God's good providence, they were to be removed from it, you might search far before you could fill up the void occasioned by their absence. On the other hand, there are those who appear as much out of place in their calling, as a merry andrew would be in a pulpit, or a chimney-sweep in a baker's shop.

Some men have natural gifts befitting them for particular undertakings, and others have acquired attainments which render them equally efficient. When this is the case keep every one in his proper place; the blacksmith to his hammer, the coachman to his whip, the surgeon to his lancet, and all will go well; but if we put the surgeon's lancet in the hand of the blacksmith, and the blacksmith's hammer in the hand of the surgeon, what a pretty piece of business do we make of it! Again, I say, 'tis a good thing to know for what we are fit, and for what we are unfit. And also to remember, that from the changes in ourselves, and in circumstances round us, what we may be very fit for at one time, we may be very unfit for at another.

It is now the practice of many Christians to distribute tracts to their poorer neighbours, to the young, to the passer-by, and to all classes likely to be profited thereby; tens of thousands of printed monitors have thus been sent abroad in the world, and it would be hard to say the amount of good which has been done by these unobtrusive heralds of peace, these little messengers of mercy; but I have been struck by the different qualifications of tract distributors: some have appeared fit, and some very unfit for what they have undertaken.

Good men have not all amiable tempers or polite manners, the more is the pity; for the abrupt behaviour, the forbidding brow, and the rebuking tongue of a Christian man, are sad hinderances to his usefulness. There are some men that you can love at once, and there are others with whom you would hardly like to be left alone. I could point out those who, in giving away a dozen tracts, would make a dozen friends, and I could point out those, also, who, in performing the same

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service, would make almost as many enemies.

It is always a pity when a good deed is done in a bad way: it reminds me of the homely old adage, "She gives him the broth, but she bastes him with the ladle." Christians should be mindful of their tempers and habits, and Christian tract distributors should remember that *they* are read, as well as the tracts they circulate.

It has occurred to me, that if we all made a practice of carrying about with us half-a-dozen suitable tracts, for our own especial use, as well as for the use of others, it would go far in fitting us to discharge our duties in the best manner. What say you to the plan?

Now do not suppose that I am recommending what will trespass on your pockets. Do not be alarmed for your gold or your silver; not a single penny am I requiring you to lay out. The tracts that I wish to recommend are not of a common kind. They are not printed on paper with types; nor adorned with a wood cut; nor stitched with needle and thread; yet have they some especial advantages, a few of which I will describe.

They will not cost you the value of even a farthing; they will take up no room in your pockets; they will not be injured by being carried about with you; they will rather be improved than damaged by use; they may be read without spectacles, and they are suited to every place, and to all occasions.

I might recommend a hundred of these tracts to you; but there is such a thing as overdoing a matter; half-a-dozen of the most striking of them will be enough for me to speak of on the present occasion.

The first tract that I advise you always to have about you is, that of a *kind-hearted, cheerful disposition.* This will not only contribute to your own happiness, but render you a welcome visitor in every habitation. Like a sun-beam, it will throw a light on every spot. It will give a double value to the words you speak, and the deeds you perform. It will mitigate pain, dissipate gloom, remove care, and impart consolation; it will do much towards conciliating your bitterest enemies, if you have any such, and it will bind you closer to your dearest friends. With this in your possession, you may win your way to the hearts of the young and the old, the ignorant and the wise, for it is a pioneer that will prepare you a road for usefulness, making many a crooked path straight, and many a rough place plain. If you have this tract, undertakings will be very easy which otherwise would be very hard; and if you have it not, even though you have all other tracts in the world, enterprizes will be very hard which would otherwise be very easy. One single copy of this useful and agreeable tract is worth a king's crown.

The second tract that I recommend is, *a spirit of love.* This is indeed of inestimable value. Oh, what a glorious description of it is to be found in the 13th chapter of First Corinthians, wherein the apostle says, "Though I speak with the tongues of men and of angels, and have not charity, (or love,) I am become as sounding brass, or a tinkling cymbal!"

The apostle knew well the great worth of this spirit, otherwise he would never have exclaimed, "Though I bestow all my goods to feed the poor, and though I give my body to be burned, and have not charity, it profiteth me nothing!" Let me advise you to read over the apostle's description; it will be better for you to read it in the Holy Scriptures, than to read it copied out by the aged hand that is now noting down these remarks.

If you have not got a copy of this tract, try your best, and leave no stone unturned to obtain one. It would be cheap at any price, if you could buy it; but you cannot do that. Close not your eyes in slumber, and allow no rest for the sole of your foot, till you do something towards obtaining it. Pray, watch, and strive for it, every day. If you succeed, all bitterness of spirit, all envy, and hatred, and malice, and uncharitableness, will be driven away from your heart. You will then be able to look on your fellow sinners with pity, compassion, and tenderness, and to put up for your deadliest enemy that beautiful prayer of the Redeemer, "Father, forgive them; for they know not what they do." Again, I say, if it be possible, carry this tract with you every where, to calm the ruffled spirits of others, and to shed peace and tranquillity over your own.

The third tract that I beseech you by all means to possess is, *a hatred of sin.* This will prove a better defence to you than plates of brass. You will be better armed by possessing this spirit, than by putting on a coat of mail. On

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land or on water, at home and abroad, by day and by night, in your going out and your coming in, always have this tract with you. With God's blessing it will keep your heart from evil, your eyes from tears, and your feet from falling.

Men often arm themselves with pistols to defend themselves from robbers; why, where one robber attacks us, we are beset with a thousand sins. The robber takes our money, but sin takes away our peace; the robber may kill the body, but sin destroys the soul! Yes, yes! 'tis a clear case, that you cannot at all get on in your Christian course without this tract. 'Tis a good sign when the conscience is tender, and shrinks from evil as the sensitive plant does from the touch. With all your care and watching, the heart will deceive you, for "it is deceitful above all things," but if you have not a hatred of sin, have a care lest you wallow in iniquity as a sow wallows in the mire.

The fourth tract that I wish you to possess, for it is indeed a treasure, is *love of the Saviour*. If you have it not, God of his great mercy grant that it may be soon given you, for it will strengthen your hands and your heart, and move you to do more for your fellow sinners, in helping them on their way to heaven, than any thing else in the world.

Without this tract you may almost as well read the Talmud of the Jew, the Koran of the Mohammedan, or the Shaster of the Hindoo, as the Christian Bible. Seek for it, and value it as the greatest treasure. It will stimulate you to great enterprises, reconcile you to great afflictions, support you in great trials, and afford you great consolation.

The fifth tract that I would press on your attention is, *a confidence in God's promises*, get this and keep it, and you may rejoice all day, and sing in the night. I need not stop to tell you the good things God has promised to his people, for there is no good thing which he has not promised to them.

Do you think that if we really believed the eternal promises of God, which are yea and amen in Jesus Christ, that we should ever be cast down? No! it is because we believe them not, that we are dispirited. We have gleams of sunshine, seasons in which we rejoice in the Lord, and joy in the God of our salvation, but we are such poor, wavering, doubting, unbelieving sinners, that we soon begin to falter in our faith, to dishonour God, and to deprive ourselves of peace.

If we really believed that our heavenly Father would be to us a sun and shield, that in six troubles he would deliver us, and in seven let no evil come nigh us; that he would guide us by his counsel, and bring us to glory; if we had no doubt about the matter, but were fully assured in our minds, that "All the paths of the Lord are mercy and truth, unto such as keep his covenant and his testimonies;" then should we "rejoice alway," and again be ready to rejoice.

The sixth and last tract that I urge you to carry with you wherever you go, is that of *a Christian life*. You may judge of the value and importance of this tract, when I tell you, that it embodies the substance of all the rest. It has in it the marrow of them all, the very essence of every thing good and desirable.

I must honestly own that this is a very rare tract, and a perfect copy is not to be obtained. Many people in the world undervalue it, but try you to get it, and when you have it, value it far above the poor perishable bits and drops that sustain your mortal tabernacle. Compared with it silver and gold are as dross, neither can rubies fairly be brought forward in comparison with it.

And now, perhaps, you are ready to ask me, if I carry these tracts continually with me? Oh that I did! Oh that they clung to me closely as my garments, and were a part of my very being!

But, remember, you are not to screen yourselves behind my infirmities. If I am not so kind-hearted as I ought to be; if at times anger flushes my cheek, instead of forbearance and love filling my heart, it is to my reproach, but not to your justification. However numberless my transgressions, and faint my love to the Saviour—if my faith be feeble, and life blotted and blurred with a thousand, ay, ten thousand blemishes, these things will neither excuse your deficiencies, nor save you from the consequences of error.

Again, I say, and I say it with fervency and affection, get these tracts, if you have them not. Ask them of God, who gives liberally Christian gifts and Christian graces to his people, and read, mark, learn, and inwardly digest them; for they will be an ensample and encouragement to others, a lamp to your own feet, and a blessing to your souls.

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Murdering the Princes in the Tower of London.

ENGLISH HISTORY.

EDWARD V.

EDWARD IV. died in the midst of his days. Like the rich worldling in the parable, when he thought that he was in possession of much earthly good for many years, and had said to his soul, "Eat, drink, and be merry," the awful warning was sent him, "Thou fool, this night shall thy soul be required of thee;" and the anxious feeling came over his mind, Whose shall those things be that I have provided?

To him, if possessing any right feelings as a husband, a father, or a monarch, the anticipation must have been painful. The court was openly divided into factions, the queen, her children and relatives, would be left in a very trying position; exposed to the hatred of the king's brother, and many of the most powerful nobles.

It is recorded, that in his last moments, Edward called together the leaders of the different parties, and earnestly besought them to live in peace and harmony, and to protect the queen and her children. But ambition and revenge, those hateful passions, render the soul deaf to all such appeals. The long course of foreign and civil warfare, with the numerous deeds of violence and blood, had hardened the feelings, and destroyed the principles of the people, especially of the higher ranks, and prepared the leaders to commit those uncommon atrocities of which they were shortly guilty. The nobles of that day may be described in the words of the prophet, "Thy princes are rebellious, and companions of thieves; they judge not the fatherless, neither doth the cause of the widow come unto them."

The leading nobility at that time were, 1. Earl Rivers, the queen's brother, one of the best of their number, his nephew Lord Grey, and the Marquis Dorset, with Sir Thomas Vaughan and Sir William Stanley: these had the charge of the young king, then in his thirteenth year, and held places of influence. 2. The nobles who held offices of state: these were several of the prelates, and lords Hastings, Stanley, and Lovel, who owed their rise to the late king. 3. The Dukes of Buckingham and Norfolk, who, with several others, were ambitious of power and place, and were quite disposed to support Richard, Duke of Gloucester, the late king's brother, whom he had appointed Protector. The adverse feelings of these three different

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classes rendered the opportunity for unprincipled ambition peculiarly favourable. Richard was tempted to crime, and he rapidly, though, perhaps, by degrees, pressed forward in a course of guilt. Another contest was about to begin, a contest likely to be long and deep, unless the rivals of one side were destroyed by the prompt measures of the other.

At the time of his father's death, the young king was at Ludlow, and Gloucester was on the borders of Scotland. On receiving intelligence of his brother's death, Richard immediately took measures to secure his nephew's quiet accession; and in this he seems to have acted with loyalty and good faith. The council at London resolved that the young king should be brought to the capital without delay. The jealousy of Hastings against the queen's relations caused Lord Rivers to advance with only a limited force. Buckingham and Gloucester, with their followers, met Rivers, at Northampton; but the latter had sent the king to Stoney Stratford, on his way to London, evidently desiring to keep the nobles from having access to their youthful monarch.

After a friendly conference, the parties feasted together, but when Rivers had retired to rest, the dukes spent great part of the night in private consultation with their principal supporters. The sending forward the young king, and other measures taken by the queen's party, showed a determination to hold the power, if possible, in their own hands. The situation of Gloucester was doubtless critical, and required some precautions, but the determination to anticipate violence by violence, showed a want of principle, and a feeling directly contrary to the precepts of Christianity. The plan once formed was promptly executed. Early in the morning Rivers was made prisoner, and the dukes hastened to Stoney Stratford, where they seized Grey and Vaughan. All then returned to Northampton, from whence the three leaders of the queen's party were sent prisoners into Yorkshire.

At midnight, the tidings of what had taken place reached London. The queen immediately hastened to take refuge once more in the sanctuary at Westminster with her daughters, and the Duke of York, her youngest son. Hastings, whose enmity to the queen's relatives disposed him to be pleased with what Gloucester had done, sent the tidings to archbishop Rotherham, the chancellor, assuring him that all would be well; but the prelate rose, and having armed his household, went to the queen. He described the wretched situation of the first female in the land: "About her he found much heaviness, trouble, haste, and business, carriage and conveyance of her stuff into the sanctuary; chests, coffers, packs, trussed all on men's backs, no man unoccupied, some leaving, some going, some discharging, (unloading,) and some coming for more. The queen herself sat alone on the rushes, all desolate and dismayed, whom the archbishop comforted in the best manner he could, showing her that he trusted the matter was nothing so sore as she took it for; and that he was put in good hope by the message sent him from the lord chamberlain. 'Ah, woe worth him,' said she, 'for he is one that laboureth to destroy me and my blood.' 'Madam,' said he, 'be of good cheer, for I assure you, that if they crown any other king than your son, whom they now have with them, we shall on the morrow crown his brother whom you have here with you. And here is the great seal, which, as that noble prince, your husband, delivered it unto me, so here I deliver it unto you, for the use of your son.' He then departed home again in the dawning of the day, by which time he might in his chamber-window see all the Thames full of the Duke of Gloucester's servants, watching that no man should go to the sanctuary; none could pass unsearched." *Holinshed*, p. 716.

Few would envy the possessors of royalty, if they duly considered the vicissitudes to which the throne is subject; but still fewer would desire that rank and state if they knew the daily cares and troubles to which kings and queens are subject. "Surely thou didst set them in slippery places," is a description very applicable to the occupier of a throne.

The king soon arrived in London, attended by Gloucester; the leading nobles and their partizans assembled there, and a busy scene of ambitious intrigue followed. The researches of subsequent historians have laid open the particulars, and throw much light on this momentous period; but we can only give a general statement here.

Gloucester was now appointed Pro-

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tector by the parliament, arrangements were made for the coronation, and he appears to have acted with all outward demonstrations of loyalty. But his position was one of uncertainty and anxiety. He had mortally offended the personal adherents of the king, and the chief ecclesiastics in power were not friendly to him. Morton, Bishop of Ely, the most talented of their party, was likely to prove his active enemy. Even Hastings, who opposed the queen's relatives from selfish motives, was not one on whom the Protector could rely. He pressed Gloucester to order the execution of Rivers, Vaughan, and Gray, both to get rid of men personally hated by him, and to commit the duke with the young king, as the destroyer of his beloved connexions: this the protector saw, and spared their lives for a short time. Thus the leading nobles, like the wild beasts of the forest, were ready to devour each other, and all who opposed them.

The downward path, when once entered, is not easily forsaken, though the unhappy victims of sin think they can pause, and even return at every step they may take. Richard first decided to make four leading nobles his personal supporters, though as yet he seems only to have aimed at confirming his own right as protector. These were Howard, Buckingham, Lovel, and the Earl of Northumberland. But let the example of Richard show how dangerous it is to dally with temptation.

Early in June, the 22nd day of the same month, was fixed upon for the coronation. Though no outbreak of violence had yet taken place, by the 10th a declaration was made by Gloucester, that the queen's relatives and adherents were plotting his destruction, as well as that of Buckingham, and he urged his friends in the north to hasten to support him. Evidence still exists, which implies that efforts were making to annul the appointment of Richard, who now resolved on a more desperate course. He found also that Hastings was secretly opposed to him.

On June 13, he appeared at the council-board, in the Tower, and after apologizing for being so late in his attendance, (it was but nine in the morning,) he asked the Bishop of Ely to send for some strawberries from the garden of his palace at Holborn, and withdrew. About an hour afterwards he entered, and angrily demanded, what those deserved who plotted his death. The council answered, that such ought to be accounted traitors. Gloucester then bared his left arm, and showing that it was withered and smaller than the other; declared this was caused by the witchcrafts of the queen and Jane Shore. Hastings then kept the wretched Jane, who had been one of the mistresses of the late king. He, with the rest of the council, knew that Richard's arm had always been in that state, and fearful that the protector only sought a quarrel, he said, "*If*" they had done this, they deserved signal punishment. The protector asked whether they meant to insult him with "ifs." Then striking the table, armed men rushed in, and carried off Hastings, who was hurried to the green within the Tower, and after a short confession to a priest, was beheaded on a log of timber. Stanley, Archbishop Rotheram, and the Bishop of Ely, were imprisoned.

In the afternoon, the protector and Buckingham sent for the mayor of London, and declared to him and some of the principal citizens, that he had that morning unexpectedly learned a design of Hastings, to cause them to be murdered that day; and, in their own defence, they had been obliged to have him put to death. To give colour to this report, a proclamation was issued to the same effect, within two hours of Hastings' death, but as it was composed with care, and fairly written out, the resolution against this nobleman was manifestly premeditated. The people remarked upon this, and one said, that the proclamation must have been written under prophetic knowledge. To countenance the protector's false charge, Jane Shore was imprisoned and condemned by the ecclesiastical court, to perform public penance. She was suffered to live, but reduced to poverty; and had to beg her bread of many whom in her short and sinful prosperity she had befriended.

That the violence upon Hastings was premeditated, and that Stanley had received some intimation on the subject, appears from a warning message he had sent the preceding night to Hastings, stating that he had *dreamed* that a wild boar (the crest and badge of Gloucester) had wounded them both; and he advised

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that they should flee, and raise their friends. Hastings made light of this warning.

Richard now pressed forward. On June 16, he compelled the archbishop of Canterbury to interfere with the queen in the sanctuary, and to oblige her to give up the young Duke of York. She parted from her son with bitter tears, and he was taken to the king, who then resided at the Tower, as was usual before a coronation. This gives ground to suppose that Richard had then resolved to seize the crown.

On the following Sunday, June 22, Dr. Shaw, brother of the mayor, preached at Paul's Cross, then the usual resort of citizens. The preacher threw out an imputation, that the late king, Edward IV., was not the lawful son of the Duke of York; consequently the protector, whom he highly panegyrized, was the true heir of the house of York. It was arranged that Richard should enter while the preacher was pronouncing the eulogium; but by some mistake he did not appear till it had been uttered, and when he did come, the preacher thought fit to repeat the words, which excited both derision and indignation in the hearers.

On the 24th, Buckingham attended an assembly of the citizens of London, and openly urged that Richard should be made king instead of his nephew; but the act was too bold, and the treason too decisive, to be supported by more than a few hired applauders. However, Richard had removed his opponents, and was supported by the remaining political leaders.

On the 25th, Buckingham, attended by many others, went formally to Richard, at Baynard's Castle, and urged him to become king. A well-acted scene of dissimulation followed, and Richard appeared compelled to accept the crown.

Parliament met on the same day, when a bill was presented, urging Richard's claims. This document stated, that Edward IV. had been lawfully contracted to Eleanor Boteler, a daughter of the Earl of Shrewsbury, before he married Lady Grey; therefore his union with the latter was stated to be unlawful, and that the young princes were illegitimate, and disqualified for the throne. Clarence's children were next in the succession, but their father having been condemned for treason, these also were set aside, and then Richard stood next in the succession. The parliament approved this futile plea, and Richard was entreated to take the crown!

He complied, nothing loth, and issued a proclamation as king, on June 26. The first sanguinary measure necessary to confirm his usurpation was the death of Rivers, Vaughan, and Grey: orders for this purpose were already issued; they were tried at Pomfret, before the Earl of Northumberland, on a charge of plotting Richard's death, and were condemned and executed.

By this time a number of Richard's supporters had arrived, armed, from the north, and his coronation was ordered to take place on the 6th of July; preparations on his nephew's account had already been made, and the alterations required were but few; one among them is however singular. Robes were ordered for Edward as Prince of Wales, and a place assigned him in the procession. From hence some have argued, that his uncle did not design his death, though this proves nothing. It might have been a mere matter of ceremonial, originating with the officers to whom the arrangements were left; it might have been intended to conceal the murderous designs of the protector; or, perhaps, the young prince actually walked in the procession. He was not so popular, neither was his uncle so unpopular, that it was as yet dangerous to exhibit him in public.

The ancient chronicles, however, do not enumerate the prince among the nobles who are mentioned by name, as present at the coronation.

The people do not appear to have taken a deep interest with respect to these proceedings. *Hall* says, the people marvelled at this manner of dealing, but "they said, these matters be kings' games, as it were stage plays, and for the most part played upon scaffolds; in which poor men are but lookers on, and they that be wise will meddle no further, for they that step up with them when they cannot play their parts, they disorder the play, and do themselves no good." This line of conduct was prudent, and dictated by worldly wisdom; but it is better to arrive at the same conclusion upon principle, and according to the precept of Holy Writ, "My son, fear God and the king, and meddle not with them that are given to change."

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Richard III., Queen Ann, and Prince Edward.

RICHARD III.

When Richard III. acquired the crown, at the cost of deep and complicated crime, he was but thirty years of age. He evidently owed his elevation to those who themselves sought power, quite as much as to his own ambition. The times in which he had lived from youth to manhood had rendered him an unshrinking, hardened villain; but we have no reason to attribute to him any deep-laid system of long-projected crime. The temptation came before him, he was prompt to seize the opportunity, and unhesitating as to the means he used.

As king, Richard sought to render himself popular; among other measures, he released Stanley and the archbishop of York. This was a magnanimous proceeding as to the former, who would probably feel some resentment against Richard, for he had been arrested with Hastings; and, in the confusion, a blow, which narrowly missed Stanley, was aimed at his head by a soldier, apparently by Richard's special direction.

The coronation was performed with peculiar efforts to give it imposing pomp, and Richard, doubtless, determined to enjoy his new honours to the utmost, and to maintain them with the same decision he had exerted in acquiring them. He told a confidant that he meant only to keep the crown till his nephew was twenty-four years old, and able to govern. He might possibly have deceived himself with this idea, but it is not likely that when the time arrived he would have been contented to forego his accustomed state.

Richard now dismissed his northern forces, and began a progress, or circuit through the country. Going to Reading, on July 23, 1483, he proceeded to Tewksbury, and was at Warwick, on August 8, where he received an ambassador from Isabella, queen of Castile. In his address, the envoy stated the displeasure his mistress had felt at Edward's neglect or refusal of her hand. Had the patroness of Columbus become the wife of the king of England, instead of the consort of the king of Arragon, how different might the result have been to the world at large! On what a slender thread momentous events depend!

Richard entered York on August 31, and there a scene of royal state, resembling a coronation, was enacted, and his son was created Prince of Wales. In the latter end of September he was at Pomfret, and now he heard of open disaffection, and that the people were become anxious for the liberation of the young Prince Edward. A report was then circulated that the princes were dead, but

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by what means, or under what circumstances, no one could tell. Richard probably thought that the death of these royal youths would quiet all efforts to disturb his power, as no others would be likely to rival him in the public view. But he was mistaken. The popular grief was manifested in terms which were not doubtful; it was concluded that they had perished by violence, and Richard speedily lost the affection of his subjects.

What was the fate of these princes? Fabian, who lived at that time, and who was sheriff of London in 1493, briefly states, that the common fame was, that Richard had put the two sons of his brother to recent death in the Tower. The detailed account of Sir Thomas More, who lived shortly after, and professed to have heard it from those worthy of credence, relates that Richard employed Sir James Tyrrell, who engaged two ruffians, Forrest and Dighton, and that they smothered the young princes in bed, and buried them under a stair-case in the Tower. The subject, whether these princes were murdered or not, has been much controverted; and in the following reign a person appeared who assumed to be one of these royal youths; but, upon the whole, there is no reason to doubt that they were foully murdered. It was a feature in Richard's character not to encounter danger with courage, but to anticipate it, if possible, by crooked and unscrupulous means. When he found reason to expect a change of popular feeling in favour of the rightful heirs, and he would soon receive intelligence of this, it would be quite consistent with his views to anticipate the danger by a crime; and we have no reason to suppose he would hesitate, either as to the act itself or the means employed.

It is proved that the persons named by More were rewarded by Richard for their services, and the narrative points to circumstances agreeing with the account given of his progress. He was at Leicester from August 17th to the 19th, during which days the murder was probably perpetrated; and he was at Nottingham on the 22nd, most likely solacing himself in his fancied security from the event of which he had just been apprized. The reader will presently have to recall to mind this locality and these dates. A still stronger proof of Richard's guilt is, that when Richard was pressed by the invasion of Richmond, whose pretensions would have been at once dissipated by a statement that the princes yet lived, the usurper did not venture to assert that they were living.

Richard must have been much surprised when, on examining into the rumours of conspiracies against him, he found full cause to believe that Buckingham was a guilty party. That duke was too grasping and ambitious to be satisfied by any gratifications Richard could give. The king saw that Buckingham was too powerful as a subject, and the love of finery and dress, felt by each, furnished another reason for disagreement, easily appreciated by those who are at all acquainted with the wayward fancies of the human mind. Pride, in fact, was the root of this quarrel; "only by pride cometh contention;" and there was no small degree of this hateful quality in both these haughty men. Even Buckingham's place at the coronation as lord chamberlain, while a rival, Lord Stanley, was high constable of England, and therefore in a position better suited for personal display, might have originated, and must have increased, feelings of jealousy and discontent. The duke, thus offended, left Richard at Gloucester, and repaired to his castle at Brecon, whither Bishop Morton had been sent to be kept in safe custody. The wily prelate heard Buckingham's murmurs, and increased his discontented feelings, which proceeded till he fancied himself to have a right to the crown; but his day-dream was dissipated by meeting the Countess of Richmond. He then recollected her son, and resolved to pursue the course which was afterwards realized by others, to place the earl upon the throne, and to unite him with the house of York by a marriage with one of Edward's daughters. Morton readily promoted this scheme, and arrangements were made for a general rising on October the 18th, in favour of Richmond, who was to land at that time.

Richard was apprized that Buckingham had some designs in contemplation, and invited him to court. An excuse, on the plea of illness, was followed by a peremptory summons, and that was met by a decided refusal. Buckingham took arms on the day fixed, and others did the same in various places. But Richard was prepared; his partizans were previously in arms, and orders were issued for the military execution of the revolters. Buckingham's force was the most considerable, but the elements fought against him. Continued rains and floods, so un-

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usual at that season, as to be remembered many years after as "the Duke of Buckingham's flood," prevented his advance, and dispersed his followers. Left with a few attendants, he sought concealment at Shrewsbury, in the house of a man named Banister, one of his dependents. This faithless retainer betrayed Buckingham, who was conveyed to Salisbury, whither Richard had advanced, and he was there beheaded. He sought permission to speak with Richard in private; this was refused, and it was afterwards known that he intended to have stabbed the king with a knife concealed for the purpose. Richard now proceeded through the western counties, causing many to be executed. The Earl of Richmond had touched upon the English coast, but learning the failure of Buckingham's revolt, he returned to the continent, where he was joined by Dorset, and other noblemen and gentlemen, who succeeded in escaping, and there mutual pledges were given for future enterprizes.

Richard now appeared to be more firmly seated on his throne, but he had secured it by additional crimes. The public voice, and the still more powerful secret monitions of his conscience, warned him that he had incurred the murderer's curse. More thus describes the anguish which harassed the brief remnant of his reign. "I have heard, by credible report, with such as were secret with his chamberers, that after this abominable deed done, he never had quiet in his mind; he never thought himself sure. Where he went abroad, his eyes whirled about; his body was privily fenced; his hand was ever on his dagger; his countenance and manner like one always ready to strike again. He took ill rest at nights, and lay long, waking and musing. Sore wearied with care and watch, he rather slumbered than slept. Troubled with fearful dreams, sometimes he startled up, leaped out of his bed, and ran about the chamber. So was his restless heart continually tossed and tumbled, with the tedious impression and stormy remembrance of this abominable deed."

The people shouted their admiration on Richard's return to London, and called him blessed; but the weight of blood pressed heavily on his soul, and cried against him to Heaven! He sought to revive his popularity, and did many generous and charitable acts; but pardon for blood-guiltiness cannot be purchased. "The sacrifices of God are a broken spirit; a broken and a contrite heart, O God, thou wilt not despise." But by such feelings as these, Richard never was influenced.

The usurper endeavoured to maintain his blood-purchased power with an iron grasp. He made large preparations of a warlike nature. All who dared to express sentiments against him were visited with speedy punishment; even the authors of jests, and the devisers of prophecies suffered, if they appeared to reflect upon him. He took many other measures to repress public feeling. The queen of Edward IV. was now induced to allow her five daughters to repair to court, upon Richard giving a solemn public pledge that they should not be injured.

The first blow which reached this usurper was a retributive stroke of Providence. In February, 1424, he caused the principal persons in the land to swear fealty to his son, prince Edward. In two short months this youth, just about the age of the murdered princes, was stricken with illness, and soon expired. The grief of the royal parents was excessive, but they had not time even to indulge in sorrow.

Richard had bribed Landois, the unprincipled minister of the sovereign of Bretagne, and had laid a plan to seize the person of Henry, Earl of Richmond. Intelligence of this was conveyed to the intended victim, just in time to allow him to escape to France. Here he found protection, and though the French king was induced by Richard rather to counteract than to forward Richmond's plans, yet his party continued to increase, and he had a safe shelter from which he could issue replies to Richard's proclamations against him.

In the winter, queen Anne had sickened. Richard has been charged with hastening her death, but there appears no ground for this suspicion, though it is probable that ambition choked his feelings of affection; and as soon as her death appeared probable, he projected a union with his niece Elizabeth, whereby he might secure her title to the throne. Such a marriage would be regarded as monstrous, and was contrary to law; but the word of the pope could make it pass as lawful, and papal sanction might doubtless be obtained; also ambition deadens both the affections and the voice of conscience. Some theologians however stated their opinions, that not even the pope could make such a marriage

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lawful; and, what probably weighed more with Richard, his principal supporters firmly opposed the union: evidently, the prospect of Edward's queen regaining any influence was very distasteful to them. As to the power assumed by the popes, they had, in more recent times, sanctioned marriages between uncles and their nieces; and when it is remembered that the pope assumes the power of dispensing with any of the Divine laws, there is no reason to suppose he would have hesitated respecting a measure which would have placed Richard under the power and influence of the clergy. But, under the existing circumstances, the king found it necessary publicly to disavow any idea of forming such a union.

In the beginning of 1485, it was evident that Richmond meant to make another effort to invade England, and the number of his supporters gradually increased, while the popular feelings against Richard became more marked. Still no danger appeared at hand. The usurper was well prepared to resist an invader, while every discontented noble that passed to France lessened the number of those likely to make insurrections at home.

The events which crowd upon each other during the reign of Richard show, in a striking manner, how God in his providence over-rules the designs of wicked men, and frustrates their deep-laid plans. We have seen that the murder of the young princes was injurious to Richard, instead of strengthening his cause. It alienated the minds of many, and at once raised up an active pretender to the throne. His other measures of state policy still further weakened him, by the removal of active and powerful supporters, such as Buckingham; and now he rendered himself obnoxious to the wealthy part of his subjects, who would otherwise have objected to a change, by exacting forced loans and benevolences, although he had assented to a law declaring these loans to be illegal. In other respects, he exposed himself by selecting counsellors and agents who had not forgiven him for former injuries, or who were unfriendly to his cause. One of these, Kidwell, the attorney-general, who had received considerable grants, treacherously pointed out to Richmond those who commanded in Wales and Cheshire, as being friendly to his cause. This decided the invader, and leaving all the points which Richard most sedulously guarded, he attacked England in the quarter most favourable for his success. The low state of the exchequer had induced the king to dismiss his fleet.

In July, Richard, as yet unable to ascertain the intended movements of his enemy, took up his residence at Nottingham, a central station, whence he would be able to move upon any part of the kingdom where his presence might be required. Richmond embarked at Harfleur, and on August 1, 1485, he arrived at Milford-haven with about 2000 followers, who are described as a ragged and dissolute crew. Being a descendant of the ancient Britons, he was favourably received in Wales, and hastened towards the interior. At first he was disappointed as to the support of Rice ap Thomas, the commandant of Wales, who had recently taken a special oath of fidelity to Richard, accompanied by an assurance that an invader should not pass except over his body; but Richmond pressed forward, and when he approached Shrewsbury, was joined by Thomas, who by the promise of being made chief governor of Wales, at once broke his engagements, and united himself to the enemies of Richard. Such was the chivalry of that day! It is indeed difficult for us now to estimate to what an extent the civil wars had demoralized the nobility.

Richmond was then joined by Talbot and others, and pushed forward to Stafford. He took Richard by surprise. The usurper did not proceed to meet him till August 15, and his orders to his most faithful adherents who were in the north did not reach York till the 19th. He seems to have unduly despised his enemy as a mere youth, unaccustomed to warfare. He anticipated a speedy victory, and by his orders a large force was collected, which included many who were determined to support his rival. Lord Stanley, with a large body of retainers, kept aloof from Richard, though he did not openly join the invader, as his son was in the power of the king. This young man endeavoured to escape, but being stopped and examined, he surprised Richard, by confessing his father's desire to support the invader.

On Sunday, August 20, Richard entered Leicester at the head of his army with much state. The following day he

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passed to Anbeame-hill, about eight miles farther west, and prepared for a battle on the morrow. Richmond advanced to Tamworth, but was kept in uncertainty by the conduct of the Stanleys, who with 5000 men stationed themselves between the two armies, having communications open with both. At this anxious moment, for he had nothing but the verbal assurances of most who supported him, and in fact was rather their instrument than their leader, Richmond allowed his attendants to proceed; and when darkness came on, lost his way, and remained in a small village, liable to be taken by the scouts of Richard. In the morning he joined his army, and proceeding to Atherstone, had a secret interview with the Stanleys, and settled a plan for the battle.

That night was a still more anxious one for Richard. His perturbed mind would not suffer him to rest. Conscience, though long silenced, now spoke loudly to the trembling and self-convicted criminal. An ancient chronicler says: "The fame went that he had the same night a dreadful and terrible dream; for it seemed to him, being asleep, that he saw divers images like terrible devils, which pulled and hauled him, not suffering him to take any quiet or rest. The which strange vision stuffed his head and troubled his mind with many dreadful and busy imaginations. For immediately after, his heart being almost damped, he prognosticated before, the doubtful chance of the battle to come, not using the alacrity and mirth of mind and of countenance, as he was accustomed to do before he came toward the battle. And lest it might be suspected that he was abashed for fear of his enemies, and for that cause looked so piteously, he recited and declared to his familiar friends in the morning his wonderful vision and terrible dream. But I think this was no dream, but a punction and prick of his sinful conscience; for the conscience is so much more charged and aggravated as the offence is greater and more heinous in degree; which prick of conscience, although it strikes not always, yet at the last day of life it is wont to show and represent to us our faults and offences, and the pains and punishments which hang over our heads for the committing of the same."

Treason also was busy around Richard. His attached follower, the Duke of Norfolk, found a scroll in his tent, with this warning in rhyme:—

> "Jack of Norfolk, be not too bold,
> For Dicken thy master is bought and sold."

Richard, in the morning, threatened dreadful vengeance upon his enemies. When he found the Stanleys still kept aloof, he ordered the son to be beheaded; but his attendants deemed the result of the battle too uncertain to incur the personal hazard of this act, and reminded the king that it could be done as soon as the combat was over.

Richmond also sent to the Stanleys, but they still delayed to join him. This was an anxious moment. He had only 5000 men; Richard had more than 20,000, while the Stanleys headed 5000 men on the one side, and 3000 on the other. Richard rode through his army, declaring his intention to conquer or die; but many of those he addressed were determined to stand neuter, while others had resolved to join the enemy. Several leaders had gone over to Richmond with their troops the preceding night.

After some manœuvring, the action began at an early hour. It was at first called "the field of Redmore," probably the name of the marsh which lay between the two armies, but it has usually been called the battle of Bosworth, from the name of the neighbouring town. Richmond's forces turned the marsh and attacked the centre, where Richard had stationed himself with Norfolk's troops, being those on whose fidelity he could rely. The struggle was severe, but Lord Stanley now charged the supporters of Richard, while Northumberland, who commanded nearly a third part of that prince's force, drew off his troops, and looked on.

After a desperate conflict, in a momentary pause, Richard turned aside from the crowd, and drank from a well which is still pointed out. His friends brought him a horse, and urged him to fly, but he refused. Replacing his crown upon his head, he again declared he would conquer or die. The deadly strife was renewed, and the combatants again fought hand to hand. After some time Richard saw Richmond approach, when he charged forward at his rival. He speared Sir William Brandon the standard-bearer, and unhorsed others, but Richmond's friends interfered. Richard fought with desperation, he again nearly

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cut his way to his rival, and seemed on the point of deciding the day, when Sir William Stanley headed a charge upon the king, who exclaimed "Treason!" and hewed down all who approached him, till, weakened by his wounds, he fell beneath the superior numbers of his assailants.

With the death of the usurper the battle ended. The particulars which have been given, show that he fell by the treachery of a few of his own nobles; the nation at large had not taken a part in the contest. He had gained the crown by treason, and he lost it by the treachery of those whom he had personally favoured. The Duke of Norfolk, Lord Ferrers, and Sir Robert Brackenbury, with about 1000 of Richard's followers, perished in the field.

As soon as the conflict ceased, Richmond knelt on the ground, and offered thanks for his victory; the traitorous Stanley then placed on his head the battered crown which had been struck from the helmet of Richard. The victorious army and those who had joined them, marched to Leicester, and prepared to move forward to London. The body of Richard was stripped, thrown on the back of a horse, and thus carried to Leicester; the head was crushed against a wall as the horse passed over the bridge. We have to remark a singular coincidence of dates, which strikingly displays retributive justice: he was in Leicester on the very day upon which, there is reason to believe, that two years before he had sent orders from that place commanding the murder of his nephews; and he perished on August 22, the day upon which he received news of their death, or was rejoicing in the fancied security purchased by the intelligence he had just received.

After the body had been exposed for some days to public view, it was buried without ceremony at the Grey-friars, in Leicester. When that monastery was dissolved, the tomb was broken up, and the stone coffin was for several years used as a common horse-trough.

The character of Richard has many points by no means uncommon. Unprincipled and ambitious, he scrupled at nothing to obtain or keep the sovereign power. The period in which he lived was fruitful in atrocious crimes, and partly to exculpate others, and partly to blacken still more the memory of Richard, historians who wrote under the auspices of the Tudors, attributed to him an active part in many crimes in which he took no personal share. Even his person and manners have been described as deformed and degraded, though there is full evidence to the contrary. These overcharged delineations induced later writers to endeavour to remove, or at least to palliate all the charges against him, and an earnest controversy followed. But in our days historians have availed themselves of the information collected from various sources, and exhibit Richard in truer colours than the earlier writers, and these are sufficiently hateful. It is clear that he was one of those described by our blessed Lord in these words: "Ye are of your father the devil, and the lusts of your father ye will do. He was a murderer from the beginning, and abode not in the truth, because there is no truth in him." In describing the deeds of such a character, there is no occasion to seek to deepen the atrocious features which undoubtedly belong to it. The extent to which mutual slaughter, or rather murder, had been carried during the period just closed, is shown by the family losses of Cecily Nevill, Duchess of York, who lived to enumerate three kings and one queen of England among her direct descendants. Her brother-in-law, the Duke of Buckingham, was slain at Northampton by the followers of her son. Her husband, her brother the Earl of Salisbury, and her son the Duke of Rutland, were slain at Wakefield. Her nephews, Warwick and Montague, were slain at Barnet, fighting against her son. One son-in-law, the Duke of Exeter, died in exile; another, Sir Thomas St. Leger, was beheaded. Her son, the Duke of Clarence, was put to death by his brother Edward IV. Lastly, her remaining son perished in battle, after having slandered his mother's fame, and caused her two grandsons, Edward V. and the Duke of York, to be murdered. What an awful roll of mourning and woe! Such narrations show the empty nature of worldly pomp and vanity, and may well cause the cottager to rejoice that he is permitted to enjoy peace and safety beneath his humble roof. Doubtless, many a titled wife and mother of that day had to lament over a list of departed relatives, similar to that we have noticed, though not quite so high in rank and titles.

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THE PERAMBULATOR.

EXCURSION TO FRANCE.

PART III.

The French Chasseur—Friendly Contention—Pontoise—Cabaret and Cabaretier—Invitation—The Low Gaming-house—The Hostess and the Sallad—The Supper—Roguish Conduct of the Chasseur and the Cabaretier—The Two Gamesters—The Supper Bill—The awkward Situation—The Inn Yard—The Valet d'Ecurie—The Crisis—Great Excitement—The Two Travellers—The Sudden Retreat of the Chasseur—Arrival at Paris.

After a walk of eleven or twelve miles, I entered a cabaret, or town public-house, at Chars, where I was soon joined by a sprightly looking Frenchman, who shrugged his shoulders, and expressed much surprise in finding me there. He said that he had passed me several times while I sat by the way-side, making notes on paper, and he could not make out how it was that I had outwalked him.

Thinking it a good opportunity of picking up a little French, I agreed to accompany him on the road to Paris, and willing to show him a civility, I paid the reckoning for the refreshment we had both taken. He was in high good humour, had something to say to every one we met, and entertained me by a relation of his exploits when a chasseur under Napoleon. He showed me his scars,

"Fought all his battles o'er again,
And thrice he slew the slain."

Perceiving, however, in him too great a fondness for forte biére, and also a disposition to trespass upon me, I felt constrained to be on my guard.

I was anxious, if possible, to reach Paris that night, though a distance of thirty-four or thirty-five miles in addition to what I had already walked, was a bold undertaking.

The chasseur and I, as we journeyed on, by degrees were betrayed into a friendly contention; he attempted to outwalk me. At first the thing was treated as a joke, but it afterwards grew more serious, appearing like a sort of national affair. There was I, an Englishman, by accident pitted, as it were, against a Frenchman; a spirit of rivalry rose within me, and I should have sunk in my own estimation had I allowed myself to be beaten.

The sun had great power, so that what with the heat and our unusual exertion, we were soon bathed in perspiration. The chasseur took the lead, ejaculating most vehemently. My slender knowledge of French only enabled me to comprehend some of his remarks; they amounted to this, that he was determined to finish me up at once.

On went my companion up a hill, which must have been more than a mile in extent; being close behind him, his distress was very visible to me; he kept up to the very top of his speed, wiping his streaming face with his handkerchief every dozen paces. I kept as close to him as his shadow, and never lost a single step; he tried me hard, very hard, but could not shake me off, for I could have taken the lead when he was fairly exhausted. When we came to Pontoise, he entered a cabaret, declaring that he could walk no further.

There is much indiscretion in allowing ourselves to be led into such unnecessary exertions; the state in which we both were was pitiable, and I felt confident that it was highly dangerous; the rupture of a blood-vessel in such an uncalled-for competition would have been a melancholy source of bitter recollections.

We had not sat long in the cabaret before I discovered that the cabaretier, or publican, and my companion, were well known to each other, and many little circumstances took place which made me suspect that I was not in the best company. A restless anxiety came over me; I expressed a desire to proceed, and was only persuaded not to do so by the assurance that a diligence would leave Pontoise about one or two o'clock in the morning.

Just before the chasseur accompanied me to the house, whence he said the diligence would start, the host of the cabaret presented me with a note, requesting the honour of monsieur's company to a little supper. I hardly knew how to escape from this civility to a stranger, and, judging that it might be quite inconsistent with French notions of politeness to refuse, I accepted the invitation, though several things which had already occurred put me on my guard.

After taking places in the diligence, the chasseur and I returned towards our cabaret, when he proposed to show me a little of Pontoise. We walked up one street and down another, till he entered a house, inviting me to follow, which I did. I soon perceived that it was a low gaming-house. In one room persons were playing at billiards, in another at cards and dice, in a third at different chance games. The love of character and adventure had strong influence over

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me; and well knowing that no circumstance could induce me to take any other part in the scene than that of a spectator, I stood looking on, while the chasseur, with a familiarity that showed his acquaintance with the parties engaged, joined them in conversation.

It was not long before he hoped to have the honour of playing at billiards with monsieur, or at cards if more agreeable, or, in short, at any thing to pass away an hour pleasantly; but monsieur was obdurate as adamant. The chasseur then went into another room.

It may be said that I ought not to have entered, or, at least, that I ought not to have remained a moment in a house of this description. This is readily admitted, but the object of my French excursion was to see and know as much of France and French customs as my limited opportunities would afford; there was a strong temptation to witness, but none to partake of, the thoughtless follies around me. I am, however, not attempting to justify myself, for I was wrong, but simply narrating a fact.

Feeling ill at ease, and wishing to quit the place into which I had unwittingly been drawn, I went into the room to beckon away my comrade; he was in close conversation with two gamesters, of a very unprepossessing appearance. A more urgent attempt was then made to get me to play. At this moment the host of the cabaret, where I was to sup, came in; it immediately occurred to me that this was by appointment, that I had not been drawn there without a design, the host and the chasseur were to take advantage of the stranger; and this impression was not at all weakened by what followed.

It was with some difficulty that I got out of the gaming-house, for the party were evidently disconcerted at my determination to leave. Once more the chasseur and I came to our cabaret.

On stepping into the kitchen, to have my coat brushed, I observed the worthy hostess preparing a salad. Having occasion for an additional light, she wrapped the end of a candle in a lettuce leaf, and then seizing it firmly, she screwed it into a candlestick; after which, with the most perfect sang froid, she went on dressing, with unwashed hands, the savoury salad, so soon to be laid before me.

Supper time came, and I sat down to table with monsieur the carbaretier, madame his wife, and my travelling companion, the chasseur. Considering it necessary to be on my guard, I ate nothing but a few heads of asparagus, with one or two biscuits, and drank nothing but water. The chasseur called for wine, which forthwith made its appearance, and neither he nor the host seemed to be soon satisfied. Brandy, too, was required, and provided; and being merely a guest, I had no right to interfere.

The by-play carried on between the cabaretier and the chasseur convinced me that mischief was brewing. I leaned back in the corner where I sat, and affected to be asleep, while they continued to empty their glasses. A consciousness of insecurity came over me from what I had observed, and I determined, on no account, to retire to rest. It must have been about midnight when the two gamesters with whom the chasseur had been so familiar at the gaming-house, stalked into the room, and occupied an adjoining table. The chasseur handed them a bottle of wine from our table, telling them, in an under tone, and with a significant shrug, that I was asleep. All this was observed by me, as well as much more that passed, by no means calculated to allay the unfavourable impression made on my mind.

At one o'clock the chasseur jogging my elbow to awaken me from my affected repose, began to intimate that it was time to prepare for the diligence. I signified my readiness to accompany him, when he pushed towards me a little strip of paper, on which was scrawled the following bill:—

	f.	*c.*
Veau	3	0
Asperge.....	3	0
Pain	0	6
Vin	6	10
Gateaux	1	4
Eau de Vie, &c. ...	5	16
	19	16

Nothing could be more apparent than their intention to make me pay for the veal, asparagus, bread, wine, cakes, brandy, and salad, which they had consumed. Nineteen francs and sixteen sous, or sixteen shillings and sixpence, was the amount.

It was in vain that I affected not to understand their meaning, and afterwards insisted that I had only been their guest: they requested, required,

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and at last demanded from me the amount, saying that the supper was altogether for monsieur. Turning round to the two gamblers, I handed them the note of invitation to supper which I had received, and asked them if, under such circumstances, any demand could with justice be made upon me. Shrugging their shoulders, and lifting up their eyebrows, and shaking their heads, they simply replied, that it was monsieur's business, and not theirs.

Though inwardly burning with indignation, I felt fully alive to the awkwardness, if not danger of my situation, and to the necessity of keeping myself calm. It was midnight. I was surrounded by those who had the power, and perhaps the will to do me a mischief. When quite collected I could only express myself in French with great difficulty—to do so when excited would be out of the question. My place was taken in the diligence, and I wished to be in Paris before the inhabitants of that great metropolis had risen from their beds. To resist payment would produce altercation, perhaps violence; to struggle with four ruffians would have been useless; and to be dragged to a police-station would have been humiliating and inconvenient.

While sternly debating the matter with myself, in came a meagre figure, wrapped up in a coarse great-coat, with a cap on his head and a lantern in his hand, to announce to us that the diligence was ready. I rose directly, threw down a napoleon, or twenty franc piece, on the table, and prepared to depart; but no sooner was the bill discharged, than the cabaretier, the chasseur, the two gamesters, and the meagre man in the great-coat, all informed me that the diligence would not leave Pontoise for more than an hour. The entrance of the man with the great-coat and the lantern was a mere *ruse* to make me pay the bill.

Determined to quit the cabaret, I made for the door, but found it fastened. Without waiting for assistance, I began to undo the bolts, and soon succeeded in getting into the street, but the night was too dark to proceed alone. I stepped back to ask the chasseur if he meant to accompany me; and found him tying up a bundle, putting into it part of a bottle of brandy for which I had paid, and making an appointment with his friends to meet him, when they would drink up the brandy. Where this meeting was to be I did not know: dark thoughts rushed through my mind.

The chasseur led me up one street and down another, apparently pretending that he had lost his road; this seemed to me to be a part of his plan; he evidently wished to delay the time of our departure. Fearing that we might be too late at the office of the diligence, and not without apprehension of being joined by his suspicious companions, the cabaretier and the gamesters, I sharply asked him what he meant by such conduct; and taking the lead, fortunately found my way to the office.

While I write, the inn-yard, a striking scene, is vividly present to my remembrance. It was a spacious area, a part of which was crowded with chariots, cabriolets, and voitures, with uncouth lumber lying about. The buildings round were high, with an old-fashioned gallery and jutting windows. A half-starved looking stable-man, an English hostler would have been ashamed of him, was in attendance. The large and dirty horn lantern which dangled from his hand, made the objects around dimly visible. The feeble and flickering light arrayed the place with mysterious loneliness.

In vain I looked around for the diligence; no diligence was there. In vain I sought the office door to obtain information; the office was closed, the scarecrow of an hostler was the only human being to be seen on the premises, with the exception of the postilion, who was holding a muttered conversation behind the voiture with my half drunken companion the chasseur. The valet d'écurie, or hostler, at last went to the stable, brought out two horses, and began to harness them to an old crazy voiture, when I was informed that the voiture would convey us two or three miles on the road to a place where the diligence would pass.

This was an arrangement that at first I felt determined to resist; but a moment's consideration told me that I should be in equal danger if I remained in the streets, or even if I returned to the cabaret. Demanding to see the office-keeper or the landlord, I thundered at the door of the Auberge, but all in vain; the meagre looking Frenchman told me that he durst not call his master. I then required to know the exact time

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at which the diligence would be at the place to which the voiture was to convey us, and consulting my watch, discovered that of necessity, by the man's own account, the diligence must pass the place half an hour before we could arrive at it. Things seemed now drawing to a crisis; and never, in the course of my life, was I so much excited as at this moment; the past rushed upon me; the behaviour of the chasseur on the road, his conduct at the gaming-house, his roguery at the cabaret, the appointment he had made with his companions to join him, and his pretending to lose his way;—all this put together boded no good, and disposed my mind to believe that evil was intended me.

Here was I, alone and unarmed, in the middle of a dark night, to trust myself in a voiture with a most suspicious companion, with the certainty of being too late for the diligence, and with the momentary expectation of being joined by the host and gamesters left behind us at the cabaret.

Fond as I was of adventure, this appeared to me a very desperate one. If I had had pistols, a dirk, or even a stout stick in that moment of excitement, I should have felt comparatively easy, but I had neither. A spirit of determination suddenly came upon me, and no sooner did the chasseur enter the carriage, than taking my knife from my pocket, I opened it, firmly grasping the handle, resolved that if violence should be offered me, the traitor in the voiture should not escape. It is an easy thing when a danger is past to perceive how we ought to have acted. Had there been time for reflection, I should have shrunk from the fearful responsibility of using a knife against a fellow-being, while it was possible to avoid it. I am not prepared to defend this rashness, and am fully aware that a calmer and a better course might have been taken; but the darkness of the night, and a vague surmise of intended violence, wrought upon me, and raised within me a stern spirit of self-defence. The false step which I had made in keeping company with an unworthy companion had led me into errors; and had brought me into the perilous dilemma in which I then found myself. All this flashed across my mind; but there was no undoing what had been done.

Already had the postilion mounted his horse, encasing his legs in his enormous jack boots; already had I set my foot on the steps to enter the voiture, when a trampling under the inn gateway attracted my attention. In a moment I stepped back, and crossed the yard to the gateway. Two figures approached, handkerchiefed and great-coated for travel, with a goodly appendage of trunks and portmanteaus, partly borne by themselves, and partly carried by a porter. They were going to Paris; one of them was a German; his English was, if possible, worse than my French, but that did not signify; we contrived to understand each other; and, in five minutes, it was arranged that we should all travel together in the voiture.

The chasseur, after a private parley with the postilion and valet d'écurie, once more entered the voiture, and doggedly seating himself in a corner, with his brandy bottle behind him, soon began to snore, to the great annoyance of us all. Every now and then he fell against the German, who becoming highly incensed, put out the point of his elbow for the chasseur to fall against.

As I journeyed on, I could not but gratefully reflect on the timely and providential succour which had liberated me from all apprehension. We are apt to acknowledge God's goodness in our more striking preservations, and to forget how continually we are indebted to his protecting care. Not only every day, but every hour of our lives, may we exclaim, "The goodness of God endureth continually."

It unfortunately happened that I had given the chasseur my address; on a strip of paper I had written down the name of the hotel at Paris where I intended to take up my abode; and unless I could get possession of this paper, he and the whole Pontoise party, for aught I knew, might again annoy me with their company.

When we were between Franconville and St. Denis, the grey dawn of the morning appeared; taking out my pencil, I then asked the chasseur for my address, as though I wanted to make some addition to it. No sooner did I obtain it, than fully satisfied he had not committed it to memory, I tore it in pieces and scattered it out of the window, asking if he knew why I did so? He shrunk back abashed into his corner, while I related in the best manner I could to my new companions the manner in which I had been used. I spoke also to the chas-

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seur, charging him with his roguery, and telling him that if I ever met a Frenchman in England, under the same circumstances as those under which he had met me, I would give him a sovereign rather than wrong him of a single sous.

Nothing could exceed the attentions of my new friends. In every way they tried to make themselves agreeable, while the chasseur did his best to shrink from notice. We travelled along rapidly, and the moment we arrived at St. Denis, the chasseur leaped out of the voiture, making good his retreat with such precipitation as to leave behind him his ornamented headed cane, and his beloved brandy bottle, which was found broken.

With what anxious eyes did I look about me, when we reached the environs of Paris. Its fortifications, its avenues of trees, and its lamps, suspended by ropes over the centre of the broad streets, interested me by their novelty. Before the inhabitants of the city had risen, we had passed the Barrière de St. Martin. On quitting the voiture, I hastened to my hotel, where a thorough ablution and a good breakfast refreshed me, and I looked forward with much interest to Parisian scenes.

I was now really in Paris, the city of the Louvre, the Palais Royal, and the Tuileries, the place of palaces, of bridges, and of boulevards. I should now gaze on the site of the Bastile, and stand where stood the murderous guillotine of the Revolution. I should now see, with my own eyes, Notre Dame, Napoleon's pillar, the Champ de Mars, and the Champs Elysées. I should descend the catacombs, climb up Mont Martre, visit the Jardin des Plantes, and roam through Père la Chaise!

Years ago I had almost persuaded myself that I should never see Paris; it seemed too bright a vision to be realized, yet there I was! The little difficulties I had surmounted in my enterprise, gave a zest to the feast before me, and heightened my enjoyment. Every man has a golden treasury of resources within himself, and seasons of trial alone make known to him the amount of it. Our hearts are soon cast down when we are only passive spectators of difficulty, but when called on to act, we can bear up bravely against a combination of minor miseries. I felt bent on fully occupying every hour. I yearned to see Paris thoroughly, from the monarch holding the golden sceptre to the sweeper of the streets; from the proud palace of the Tuileries to the lowliest cabin of the poorest of the poor.

THE HARVEST OF EGGS.

The Arrau, or *Toituga*, which deposits the eggs that are so much valued on the Lower Orinoco, is a large fresh-water tortoise with webbed feet, a very flat head, a deep grove between the eyes, and an upper shell, composed of five central, eight lateral, and twenty-four marginal scutella or plates. The colour is dark grey above, and orange beneath. When of full size, it weighs from forty to fifty pounds. The eggs are much larger than those of a pigeon, and are covered with a calcareous crust.

The period at which the arrau deposits is when the river is lowest. About the beginning of February, these creatures issue from the water, and warm themselves on the beach, remaining there a great part of the day. Early in the month of May, they assemble on the islands where they breed, when thousands are to be seen ranged in files along the shores. The Indians place sentinels at certain distances, to prevent them from being disturbed, and the people who pass in boats are told to keep in the middle of the river. The laying of eggs begins soon after sun-set, and is continued through the night. The animal digs a hole three feet in diameter and two in breadth, with its hind feet, which are very long, and furnished with crooked claws. So pressing is its desire to get rid of its burden, that great confusion prevails, and an immense number of eggs are broken. Some of the tortoises are surprised by day, before they have finished the operation, and, becoming insensible to danger, continue to work with the greatest diligence even in the presence of the fishers.

The Indians assemble about the beginning of April, and commence operations under the direction of the Roman Catholic missionaries stationed in Uruana, who divide the egg-ground into portions. The leading person among them first examines, by means of a long pole or cane, how far the bed extends, and then allots the shares. The natives remove the earth with their hands, gather up the eggs, and carry them in

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baskets to the camp, where they throw them into long wooden troughs filled with water. They are next broken and stirred, and remain exposed to the sun until the yolk, which swims at the surface, has time to inspissate, when it is taken off and boiled. The oil thus obtained is limpid, and destitute of smell, and is used for lamps as well as cooking. The shores of the missions of Uruana furnish 1000 jars annually, and the three stations jointly may be supposed to furnish 5000. It requires 5000 eggs to fill a jar; and if we estimate at 100 or 116, the number which one tortoise produces, and allow one-third to be broken at the time of laying, we may presume that 330,000 of these animals assemble every year, and lay 33,000,000 of eggs. This calculation, however, is much below the truth. Many of them lay only sixty or seventy; great numbers are devoured by tigers; the Indians take away a considerable quantity, to eat them dried in the sun; and break nearly as many while gathering them; and, besides, the proportion that is hatched is such that the shores swarm with young tortoises. Besides many of the arraus lay their eggs elsewhere. The number which annually deposit their eggs on the shores of the Lower Orinoco may, therefore, be estimated at little short of a million.—*Travels of Humboldt in South America.*

TRUE REPENTANCE ILLUSTRATED.

REPENTANCE, when genuine, is the sorrow, not of a slave, but of a child, more out of love than fear; more because God is offended than hell deserved. The gospel is a call to repentance; it comes with quickening motives to it; for it gives clear and strong convictions of sin, clearer and stronger than those under nature and the law. It produces strong arguments for, and inducements to it; for it reveals Christ crucified for sin, and those hearts must be hard indeed that will not be softened by his blood shed for it. It works repentance; for it is not only a light to discover it, but a covenant will to give it, and teaches it as a worker as well as a tutor—by efficacy, as well as by doctrine. It pronounces a curse upon the neglect of it. The gospel has a terrible voice, as well as the law—a curse for our sins (except ye repent, ye shall perish)—a curse more terrible than that of the law; there is no condemnation like unto that in the court of mercy.

Many find a reason for presumption in the case of the dying malefactor, who lived a thief, but died a saint, and when crucified on Mount Calvary, ascended from a cross to a crown: but let us look a little closely into his case, and examine the nature of his repentance. He rebuked his fellow thief and companion in sin and suffering. "Dost thou not fear God, seeing thou art in the same condemnation?" He owned his own guilt, became his own judge, condemned himself, made good the evidence, justified and approved the sentence passed against him: We are justly condemned, said he, "for we receive the due reward of our deeds." He called Christ "Lord," and this when suffering as a slave. He owned him as God, for he prayed to him, "Remember me," and this when the scribes and Pharisees mocked at his prayers, "Let us see whether Elias will come to save him." He believed in him for salvation, and this when the scribes and Pharisees said he could not save himself; "He saved others, himself he cannot save." He honoured him as King of heaven; "Remember me when thou comest into thy kingdom." He proclaimed his innocency, "This man hath done nothing amiss;" and this when he was accused of blasphemy, and suffering the death of a malefactor, numbered among transgressors, and crucified between them, as if he were the chief of them! Such was this man's faith, and it was crowned with assurance of heaven, ratified and confirmed by the promise, "Verily I say unto thee, To-day shalt thou be with me in paradise."—*Francis Fuller.*

DIVINE COMPASSION.

AMONG mortals, it is an instance of love extremely rare, that any one should lay down his life, even for a good man, or a public benefactor; but God recommends his love to us, in that, while we were yet sinners, and enemies to him, he sent his OWN SON to die for us. Far from regulating the manifestations of his compassion according to the puny instances of human kindness, he not only blesses, but astonishes by the displays of his matchless favour to sinners. Yes, "God is love;" and therefore he delighteth in mercy. What, then, could be more encouraging? or what, by necessary consequence, could more strongly authorize the guilty, ungodly, perishing wretch to rely on the Lord Jesus Christ, in whom this boundless mercy is manifested?—*Ab. Booth.*

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ROSE AND CROWN LANE;

OR,

A SKETCH OF MY NEIGHBOURHOOD.—No. VIII.

No. 8, is a house that I frequently visit, and always with very mingled feelings; for there I "behold the transgressors, and am grieved," and there also I see with delight an aged saint of God "glorifying the Lord in the fires," and amidst pain, privation, and turmoil, enjoying "the peace of God which passeth all understanding," and diffusing in his conversation a holy and edifying savour of Divine truth.

I will first introduce the reader to the family occupying the principal part of the dwelling, and then to the pious inhabitant of the garret. The board over the door bears this announcement:—"North, Dealer in Tea, Coffee, Tobacco, and Snuff," and the lower squares of the front window are filled with small boards or papers, proclaiming sundry other articles of traffic—"Second-hand Clothes," "Superior Ginger Beer," "Children's Books in great variety," "Good Dripping at Sixpence a pound," "Old Rags, Glass Bottles and Phials, bought or exchanged," "Fresh Sausages." All these articles may be honestly traded in; and it is pleasant to see people attending to any honest means of obtaining a livelihood, and ingeniously multiplying contrivances, from which to obtain the means of supporting and educating their family in comfort, credit, and honest independence. But then there is great need of caution, lest under a plausible guise, that insidious principle should creep in, "the love of money, which is the root of all evil;" and under the influence of which every species of unjust gain is pursued. In the house of my neighbours, it is evident that gain is the god of their idolatry, and to it integrity, peace, and safety are continually sacrificed.

"And who art thou that judgest another?" is a question that often suggests itself to the mind of the writer of these sketches; but the consciousness that principles and conduct, not individual character, are exposed, and *that*, not with feelings of malignant or impertinent censure, but with self-application of the admonitions suggested, and a benevolent desire that they may be also profitably applied by the reader. We are to gain instruction from our observations of human character, as well as from the direct inculcation of precept. And though, when the actions of others are fair, we are not censoriously to pry into motives, and assign a worse motive when the case would bear a more favourable construction, yet when actions are palpable and unequivocal, we are not to sacrifice truth to a spurious charity, and hope that people may be very good at heart, when their works are notoriously evil. "By their fruits ye shall know them. Do men gather grapes of thorns, or figs of thistles? Even so every good tree bringeth forth good fruit; but a corrupt tree bringeth forth evil fruit. A good tree cannot bring forth evil fruit, neither can a corrupt tree bring forth good fruit. Wherefore by their fruits ye shall know them." Let not the writer, then, be accused of harshly judging others; but may both writer and readers be cautioned, and preserved from putting forth even the first buddings of evil dispositions.

The traffic at No. 8 is conducted chiefly by Mrs. North: her husband and sons being employed at their trade, that of cabinet-making; at which Mr. North is a journeyman, and his two sons apprentices. The only daughter of the family resides at home, but is seldom seen assisting either in the shop, or in domestic affairs; her mother having declared and maintained the determination, as this is the only girl, to make a lady of her. In order to this distinction, she seems to have considered three things necessary and sufficient; namely, that she should wear fine clothes, do nothing useful, and be able to boast of a boarding-school education. Miss North has discovered no disinclination to fall in with her mother's views in these particulars. Whether, however, she has failed in accomplishing the object precisely in the manner designed, or whether she occasionally goes beyond it in the ladylike particular of extravagant expense, it seems the point is not exactly attained to the old lady's satisfaction, as loud altercations between the mother and daughter may frequently be heard, in which this form of upbraiding never fails to occur: "You ungrateful, disobedient vixen, when I have been toiling and scraping all these years to make a lady of you!"

That Mrs. North has toiled and scraped, all the neighbourhood can bear witness. Those who get up earliest in the morning are sure to hear her already

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at work, beating her sausages, or knocking down the corks of her ginger-beer; or to see her scrubbing the pavement in front of her door; or in the garden hanging out her daughter's dresses. But they may see, too, indications of a more exceptionable character: — servants, among whom are most of her customers, from different parts of the town, slink in with baskets or bundles, which they hand over to Mrs. North, and receive in return a portion of her tea and sugar, or tapes and thread; and this barter, there is no reason to doubt, is carried on at the expense of their employers. Mrs. North is scarcely ever known to purchase meat for her sausages, nor has she any fair means of obtaining the dripping and many other articles in which she deals so largely; but it is known, that in many instances she has encouraged dishonest servants, and entrapped such as were weak and unsettled in principle, and drawn them into a system of fraud and deceit. I tremble when I see a young servant enter the shop, and have made some efforts, I hope not altogether without success, to rescue such from her snares. I have seen several instances, in which those who seemed to be well inclined, have, from the time of their commencing an acquaintance with Mrs. North, gone from one step to another, beginning, no doubt, with very small things; so small, that it was easy to persuade themselves that there could be no harm in making free with such a trifle; but going on till confidence was destroyed, situations lost, and character ruined. I do not know one of Mrs. North's customers who has long retained her character as an upright, trustworthy, respectable servant. Those who would avoid evil, must avoid the way and the occasions of evil, and shun all intercourse with those who would teach them to err; for "evil communications corrupt good manners." Many a harmless girl has thought little of accepting Mrs. North's civil offers of accommodation and exchange; always beginning with such things as were really her own, but has soon been startled or seduced by a proposal to make free with the property of others. Nor is it only the honesty of her customers that is put in peril by the arts of this wicked woman. She is notorious for encouraging girls to talk about the private affairs of the families in which they reside. In these conversations there is often as little regard to truth as to propriety. In this way mischievous reports are originated or exaggerated; and character is injured, and family peace disturbed, by groundless rumours, and mischievous tattle. I know more than one servant who has lost a good place by this sinful folly, and has inflicted a lasting injury on her own character, as well as that of the family whose confidence she abused.

Besides this, among Mrs. North's "large assortment of children's books," are many ballads and books of a low character, and an injurious tendency; foolish romantic stories, or books about ghosts, witches, or fairies; dreams, omens, or conjurers; these, with two or three dozens of trumpery novels, which she calls a circulating library, furnish materials for consuming the time, and polluting the mind, of many a thoughtless girl, and leading her to neglect her duties, to mispend her sabbaths, and to entertain vain notions and sinful schemes, which are likely to issue in her utter ruin.

Oh what a curse to a whole neighbourhood of servants, is one such gossiping chandler's-shop, one such school for artifice, trickery, and vice! Let it be again repeated, that dealing in the articles enumerated as among Mrs. North's traffic, by no means necessarily involves any thing dishonest or disreputable. She might procure her goods honestly, and sell them fairly, and confine her selection of books to such as are innocent and useful, and her intercourse with her customers to their own lawful business, and then she might be as upright and respectable as any other person in the Row. It is not being a baker, or a plasterer, or a chandler-shop-keeper, that makes a person either the better or the worse, but it is the spirit and manner in which the calling is pursued, whatever it may be.

I must not omit to mention one of Mrs. North's very objectionable practices. She is continually putting up things to be raffled for: these are generally such things as tea-caddies, work-boxes, footstools, and similar articles, which, it is said, Mr. North and his sons make out of their work-hours. There is great secrecy and mystery observed in this business; and it is very questionable, whether the materials are honestly come by. At best it is a vicious gambling practice, and no credit or advantage to any who are concerned in

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it. A poor silly girl once showed me a tea-board she had gained in this way, and spoke with exultation of having only paid one shilling for an article that was worth fourteen shillings. I asked her who told her the price of it; she said Mrs. North; besides, there were fourteen put into the raffle a shilling each.

"Then, Charlotte," I said, "thirteen people have given a shilling each, towards buying you a teaboard; did they give it willingly, and out of love to you?"

"Oh no; they each put in the shilling, hoping to gain the tea-board for themselves."

"Then in gaining it you have injured and disappointed thirteen people; do you think that was either kind or honest?"

"It was not my fault, they all had the same chance as I had; when I do not gain, I lose."

"Yes, I suppose so. Now, can you recollect how many times you have put into the raffle, and gained nothing?"

"No, I cannot just say: I have put in a shilling most weeks since I took my wages; perhaps ten or eleven."

"I wonder you should go on so many times when you had no success."

"Well, I was almost out of patience; but Mrs. North persuaded me, and said, I should be sure to have luck next time, and so at last it has come."

"And no very great bargain. If it were worth fourteen shillings, you have nearly paid for it, one shilling now, and ten or eleven before, beside all the vexation of ten or eleven losings. But I can tell you something more: I have got the fellow tea-board to yours, which I bought yesterday, at a respectable shop in the High Street, and for which I paid nine shillings: you may go there, and buy another if you like it."

Poor Charlotte was sadly vexed at finding how she had been taken in, and I believe she never put into a raffle again: for "a burnt child dreads the fire;" but though I convinced her that it was the dearest way of obtaining an article, I am afraid I did not succeed in making her clearly understand that all gambling is sinful, as it is a profane and presumptuous appeal to God (for there is no such thing as luck or chance) to decide a trifling matter in our favour, at the expense of others; instead of honestly labouring to get our own living, and learning to be content with such things as we have.

It often grieves me to observe nurse-maids with their tender charge, going in to lounge and gossip at Mrs. North's shop. Many an unwholesome sugar plum, or peppermint drop, is given to the poor children to keep them quiet, while the unprofitable discourse goes on. And, what is worse still, many a vain, foolish, corrupting word sinks into their ears, and may, perhaps, exert its polluting influence on their minds in years to come. I would not be a mischief-maker; but I have more than once felt myself compelled, by a sense of duty, to speak on this subject both to servants and parents.

It is now some years ago, that the life of a child was endangered, and a family thrown into alarm and distress, by this very fault:—A nurse-maid, who had been strictly charged never to take the children into any house, was so disobedient and unfaithful, when sent out for a walk with two little ones, to sit gossiping for half an hour or more, in Mrs. North's back room. She thought herself secure against being found out, as her mistress was confined up-stairs, and her master was gone to his farm, a mile or two out of town; so she was laughing and chatting away without fear. But presently the little boy, two years and a half old, was missing and could no where be found. He had seen some cows going down the lane, and thinking they were his father's cows, had followed them unperceived by the giddy servant. He was not found for an hour or two, and had wandered along a public road, where he was in danger of being run over; and when found had just reached the entrance of a thick wood, where he might have perished with hunger. The nurse-maid was forgiven; but though she retained her place, she felt that she had forfeited the confidence of her employers.

I had almost forgotten to mention, that though no one can be more accommodating and fawning than Mrs. North is to her customers as long as they go on to deal constantly, and exchange liberally with her, her intimacies almost always end in a quarrel. If a girl's resources run low, or she begins to feel conscious of having done wrong, and wishes to forsake the evil way, she is sure to find in Mrs. North's book a balance against her much larger than she expected:

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entries of articles which she is ready to maintain she never had, or double weight charged of tea and sugar, or charges for sweet things given to the children, which she thought at the time were a present from Mrs. North. It is hard to say, in these cases, on which side the right is; for the parties have concurred in wronging others. In general, however, the customer finds herself compelled to submit to extortion and oppression; and they part with ill-will, and with no disposition ever again to speak well of one another, yet restrained from speaking ill by the consciousness of partnership in guilty and discreditable transactions.

Having thus dwelt on Mrs. North's traffic and customers, it may be expected that a few words should be said as to the success of her schemes. "They that will be rich," says the apostle, "fall into temptation and a snare, and into many foolish and hurtful lusts, which drown men in destruction and perdition." It is not always that those who *will* be rich, *are* so. Their inordinate desires, and unlawful endeavours, are often disappointed and defeated. This has not, however, been the case with my neighbours; by all accounts, they have got on in the world; that is to say, they have acquired money; but money is only a means to an end; and little good is there in scraping together heaps of shining dust; or loading one's self with thick clay, and not attaining the good it was intended to procure. "A man's life" (the comfort, the improvement of life) "consisteth not in the abundance of the things which he possesseth."

Many possess much, but enjoy little. The North family are among the number. Mrs. North is not less close-fisted than grasping; and as she is always on the watch, to seize every opportunity of gaining a penny, so she is constantly on her guard to oppose the spending of it, and, if possible, to conceal from her own family the fact of her possessing it. To her husband and sons she is continually professing that the shop actually clears her next to nothing; and furnishing the table with a niggardliness that would disgrace even their own weekly earnings, apart from the shop. This meanness goads and irritates the male part of the family, who make it their plea for retaining the produce of their own labour, and applying it to their own gratification. One son is of a saving turn; he secretes and hoards all he can lay hold of: the other is of an extravagant turn; he squanders all he can get in vice and dissipation. Every individual of the group snatches from the rest with eager rapacity; and looks with a grudging eye on every acquisition and every expenditure that goes on either side. There is, however, one channel in which Mrs. North suffers her treasures to flow with a profusion the very opposite of her habitual parsimony. It is in the indulgence of her daughter, for whom she seems to consider nothing too costly: her pride, and vanity, and indolence, and whims, are indulged to the utmost. The invidious distinction between her and other members of the family is a continual source of family altercation, and as entirely fails of affording satisfaction to the favoured object, as it inevitably excites envy and discontent in those who feel themselves disparaged and injured. One year's smattering at a very indifferent school has just served to give Miss North airs of consequence, and to unfit her for the duties of her station; while it has done nothing whatever to qualify her for the class of society in which her mother and herself are ambitious she should move; and disappointment and dissatisfaction seem to rest on all the possessions and purposes of this alienated and wicked family. "Surely every man walketh in a vain show; surely they are disquieted in vain: he heapeth up riches, and knoweth not who shall gather them."

I have said that this is a house which I frequently enter: not, however, attracted by any of the family whom I have described. I pass hastily through the shop, turning away my eyes from scenes that could only awaken grief and disgust; occasionally leaving on the counter or the table a tract, and praying that the little silent monitor may suggest some warning word, that shall reach the heart and conscience, and with relieved feelings, enter the garret of old Samuel Price, the weaver.

According to the common acceptation of the saying, Samuel Price is one who has seen better days, though I can by no means fall in with the expression, nor do I think the good old man himself would. He has had more of this world's goods in his possession, and he has known the enjoyment of health, and the society of an affectionate family. Now he is destitute, bereaved, and afflicted in body; yet such are the consolations of God with

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which he is comforted in all his tribulations, that he is enabled to say, "It is good for me that I have been afflicted;" "it is better to go into the house of mourning than the house of feasting." Samuel Price sustains the honourable character of "an old disciple," one who has "feared the Lord from his youth." This remark on the character of Samuel Price reminds me of an observation I once heard from a venerable minister: "Neither age nor piety can give the character of an old disciple to one who has not sustained the character of a young disciple; a man may be an old sinner, a sincere, recent convert, or an aged penitent; but he alone can be an old disciple who became a disciple young, and who for a long series of years has followed the Lord fully." This remark, when made from the pulpit, produced a powerful impression on the mind of at least one young hearer; should it be the means of striking any young reader, the digression, if such it be, will at least be pardoned.

Through a long course of years Samuel Price has been enabled to maintain a consistent and honourable profession, adorning the doctrine of God his Saviour in all things, and experiencing under all circumstances the grace of Christ to be sufficient for him. He was not favoured with the advantages of education, and is, in the common sense of the phrase, "no scholar." He is, however, a man of plain good sense and intelligence, and religion appears in a peculiar manner to have enlarged and elevated his mind, as well as enriched his experience. "The spiritual man judgeth all things;" even among the unlettered poor, we sometimes witness striking illustrations of this sentiment of Scripture. Those who are really brought under the teaching of the Holy Spirit, and who habitually receive his gracious and sanctifying as well as consoling influences, acquire such clear and consistent views of divine truth as render them superior to the assaults and sneers of scepticism, and to the sophistries of vain speculation, and guide their steps in the way of duty and of peace. The simple yet well-grounded faith which such persons are enabled to exercise, while it fills their own minds and hearts with a peace that passes all understanding, is truly edifying to pious observers, and not unfrequently puts to silence the ignorance of foolish men. They possess the inward witness to Christianity, and they appear as living epistles known and read of all men. Such is my worthy neighbour.

By the conversation of Samuel Price, a fellow-pilgrim through this waste howling wilderness is often refreshed and cheered, and encouraged to press on through all the difficulties of the way, and hope to the end; the inquirer is often directed into the ways of pleasantness and paths of peace, and assured from long experience that a life spent in the service of God, and communion with him, is the only happy life on earth or in heaven. Also the scoffer has been constrained to pause and inquire, "Is there not some secret power in religion which sustains this afflicted man under all his sufferings, and affords him a happiness to which I with all my gaiety am a stranger?" "Yes," the good man would reply, with a beam of holy joy and gratitude shining through, or drying up his tears,

"Boast not, ye sons of earth,
Nor look with scornful eyes;
Above your highest mirth,
Our saddest hours we prize;
For though our cup seems fill'd with gall,
There's something secret sweetens all.

How rough so e'er the way,
Dear Saviour, still lead on,
Nor leave us till we say,
'Father, thy will be done.'
At most we can but taste the cup,
For thou alone hast drunk it up."

Happy the sufferer, of whatever nature his trials may be, who can adopt such sentiments. The lot of my neighbour has been one of peculiar trials. Yet, no, —should the expression be uttered in his presence, he would correct it and say, "Every sufferer is apt to think his own trials peculiar; but this is only the consequence of our own pride and selfishness. There hath no temptation befallen me but such as is common to men, and God is faithful, blessed be his name, who will not suffer me to be tempted above that which I am able to bear, but will with every trial make a way of escape. Samuel, at one time, enjoyed a moderate degree of worldly prosperity, "his hands were sufficient for him." He had constant and profitable employment in linen weaving, but changing times and mechanical improvements have thrown the hand-loom nearly out of use. Samuel, who once had a considerable manufactory, has now only one loom in his garret, and gains only occasional employment from a few old customers, who retain their preference for home-made linen, or who give him an order from

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the benevolent desire of delicately contributing to his little comforts. It is not always that he is able promptly to avail himself of their kindness. In consequence of an injury he received some years since, he is often disabled from work, and knows—those who have never experienced cannot at all understand it—the pain of having profitable and useful work lying by unfinished for want of ability to labour. This is by no means one of the lightest trials to an active disposition; but Samuel says it is permitted in order to humble him, and teach him both submission and dependence. He would rather work, but he feels himself God's servant; and if his Master bids him wait, it behoves him to find his pleasure in so doing. He used "with quietness to work and eat his own bread;" but He who feeds the sparrows and clothes the lilies, though they toil not nor spin not, has taken care that he should lack nothing, but has given him "day by day his daily bread," and he hopes he is enabled more than ever to rely on and enjoy the sweetness of dependence on his heavenly Father's care.

Samuel had a beloved family, whom he trained up in the nurture and admonition of the Lord; and he sometimes indulged the hope that these same should sustain his sinking years, and uphold the interests of Zion when his head was beneath the clods of the valley; but he has outlived them all. He had a faithful partner, who long shared with him the burden and heat of the day; they dwelt together as heirs of the grace of life, and each desired to be spared the survivor's pang. Samuel was called to smooth her passage to the tomb, during a long course of the most agonizing sufferings, which ultimately led her there, and at length he had to sigh, "Lover and friend hast thou put far from me, and mine acquaintance into darkness. I mourn, and am alone, as a sparrow upon the house-top;" but the Lord has done it, and it must be right. "The Lord gave, and the Lord hath taken away, blessed be the name of the Lord.—The Lord is my portion, saith my soul, therefore will I hope in Him.—I sorrow not as those without hope." I shall go to those I love, though they shall not return to me. I shall soon meet them on Mount Zion, where songs and everlasting joy shall be upon our heads, and sorrow and sighing shall flee away. "Whom have I in heaven but thee, O my God, and there is none upon earth that I desire beside thee.—Thou art the strength of my heart, and my portion for ever."

Reader, with all his sorrows, Samuel Price is a happy man—a man who enjoys communion with God, and lives above the world. The hour of trial and sorrow sooner of later comes to all, and proves the value of true religion either by its enjoyment or its want. The consolations which Samuel Price enjoys have not been merited by his diligence and consistency. No, they are "everlasting consolations and good hope through grace;" but in the ordinary method of Divine communications, they are the portions of those who have been enabled to honour God by a holy and consistent life. "Because he hath set his love upon me, therefore will I deliver him: I will set him on high, because he hath known my name. He shall call upon me, and I will answer him: I will be with him in trouble; I will deliver him, and honour him. With long life will I satisfy him, and show him my salvation." "Mark the perfect man, and behold the upright: for the end of that man is peace."

THE INFLUENCE OF THE BIBLE.

The uniformly good influence of the Bible, when it is read and its precepts regarded, its power of deep and thorough reformation on the human character, its capacity to confer benefits on the human race incomparably greater than any which have ever been produced by any other means, deserve to be seriously considered. It is agreeable to reason to conclude that truth alone can be universally and greatly beneficial; while falsehood and imposture, if they confer any good at all, can do so only occasionally and to a limited extent.

Consider, then, in the first place, what the human race have always been without the Bible. Civilization, refinement, learning, without the Bible, have never made men virtuous, benevolent, or happy. In the proudest times of Greece and Rome, and among the men most lauded for their exalted virtues, impurities, cruelties and impieties, most destructive to public happiness, not only existed, but

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were sanctioned by public sentiment, and were regarded as among the proper enjoyments of civilized life. As instances, we might refer to the vile lusts which prevailed, the licentiousness of their religious worship, the impurities of their domestic relations, the barbarous treatment of conquered nations, the cruelties of their criminal jurisprudence and public spectacles, particularly the gladiatorial shows, in which men were made to murder each other by thousands for the amusement of the beauty and fashion of Rome. Such is man in his best condition without the Bible, just as the apostle Paul has described him. (Rom. i. 20—32.)

Consider, in the second place, the marvellous influence which the Bible has had, though very extensively neglected and disbelieved where it is known, and among the best but very imperfectly obeyed—in correcting public sentiment, curbing licentiousness, restraining cruelty, calling forth benevolence, and making it the business of men to seek to benefit instead of injuring each other. Universally, in exact proportion as the influence of the Bible predominates over the influence of the natural propensities of men, does virtue take the place of vice, benevolence that of cruelty, and public happiness succeed to public wretchedness.

Consider, in the third place, what a change would be effected at once in the condition of the world, if all the human race were to read, believe, and fully obey the Bible! All that is wrong would cease, all that is right would be practised, perfect virtue and heartfelt happiness would be universal. What a change! And will any rational man think that such a change can be produced by falsehood and imposture? For, let it be remembered, that there is no other alternative: the Bible either is of Divine authority, or it is a book of falsehoods and imposition. Can any man, possessing one spark of right moral feeling, look at the Bible itself, and at the influence it always produces when believed and obeyed, and hesitate which side of the above alternative to take?

This sort of appeal is frequently made by Christ and his apostles. Compare John vii. 15—24; viii. 47; Luke xxiv. 32; Acts ii. 14—21; 2 Cor. iii. 1—4; 1 Thess. ii. 13.—*C. E. Stowe.*

SCRIPTURE EXPOSURE OF HUMAN DEPRAVITY.

The Scriptures not only announce it as a general truth, that all men are, by their very nature, corrupt; but it lays bare the workings of this corruption in the breasts of individuals. Like a skilful physician, it goes round to every patient in the lazar-house of this world, and, from the symptoms that outwardly appear on him, it discloses the inward workings of his disease; which, perhaps, he would fain conceal from all the world. It comes to the gay and thoughtless, who despise the ordinances of God, and who would be understood to be too refined for the vulgarities of religion, or too acute and learned to be the dupes of it; and it tells them that they have an irreconcileable enmity to God in their hearts, which makes them dislike his day, his book, his people, and every thing that savours of him. It comes to the openly wicked and profane, and tells them that "because sentence against their evil works is not executed speedily, therefore their hearts are fully set in them to do evil;" and that, whatever may be the language of their lips, they are saying in their thoughts, "There is no God." It goes to the covetous man, and, treating all his pleas of prudence and economy as of no account, it tells him that he is an idolater—that he has set up an idol in his soul, before which he prostrates his understanding and his affections, and to which he sacrifices his allegiance to the true God. It goes to the men who delight in war, and utterly despising their talk about fame, and honour, and the protection of innocence, and the good of mankind, it tells them, that their "wars and fightings come from their lusts that war in their members;" that they "lust and have not;" that they "kill and desire to have, and cannot obtain;" that they "fight and war, yet have not, because they ask not;" or, if they pretend to ask, that, "they ask amiss, that they may consume it upon their lusts." It goes to those who may attempt to substitute outward observances for the holiness required by the law of God, and strips them of their sanctimonious disguise, and tells them that they are making void the law of God; that all their works they do "to be seen of men;" and that in the applause of men they have their reward; that they are fools and hypocrites, a generation of vipers,

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who, unless they repent, shall not escape the damnation of hell. Some it sends for a representation of their character to Esau, who, although a brave and generous man, yet was a profane person, that for one morsel of pottage sold his birthright—a birthright which included in it being the progenitor of the Messiah. Others it sends to Balaam, who, being a prophet, was yet eager to take a bribe to curse the people of God. Others it sends to Aaron, who, although he was a high priest, was induced to make a golden calf for the people to worship. Others it sends to Naaman the Syrian, who was offended with the simple means for the cure of his leprosy appointed to him by the prophet, and who wished to bargain for indulgence to idolatry, for the sake of his rank and emoluments. To others, it holds out Ahab, who accounted the prophets of the Lord his enemies, because they prophesied no good concerning him, but evil. To others, Peter, who, immediately after boasting of his determined adherence to Jesus, was terrified by the question of a servant-maid, and denied his Master with oaths. Others it brings to Felix, who trembled at the preaching of the apostle, but said to him, "Go thy way for this time: when I have a convenient season I will call for thee." In short, its displays of the various workings of human depravity are numberless; and there is scarcely a shade of character which is not to be found described, and laid open in this book of God.—*Carlile.*

NOTES OF THE GOLDFINCH.

The biographer of the late Rev. Henry Gauntlett says, "The principal amusement of his childhood (and it was a predilection my father retained to the close of life) was the natural history of birds. With their haunts, instincts, and habits, he was well acquainted; to which was added an acute perception of the characteristic melodies of their various tribes. His friends have often heard him relate an incident, which, to some readers, may appear almost incredible. Among his captive birds was a favourite goldfinch, whose wild melody he considered the most perfect he had ever heard; being, however, in company with some canaries, it introduced into its song a foreign note. Its owner then gave it to a lady of his acquaintance, who had often expressed a wish for it. Shortly afterwards, when rambling in the wood, which was his favourite resort, he heard the same goldfinch singing in a tree near him. My father did not for a moment doubt the identity of the bird, though he wondered very much how it could be there. On his return to the town, he called at the lady's. 'So, madam, you have lost your goldfinch,' he said. To this the lady assented; and asked, in some surprise, how he could have known the circumstance, as the bird had only made its escape that morning. 'Oh,' replied he, 'I heard it singing in the wood as I came along.' This little anecdote may serve to illustrate the delicacy of his musical ear, for which he was remarkable. With little assistance he became conversant with the theory of music, and proceeded some way in composing a catechism upon its principles."

FULL ASSURANCE.

The full assurance of faith consists in a feeling application to Christ, or taking Christ to myself; being persuaded that by God's free gift, Jesus Christ is mine; that I shall surely have life and salvation by him, a life of holiness and a life of happiness; and that whatever Christ did and suffered for the redemption of any one of the human race, he did the same for me; he did and suffered as much for me, as for any soul in all the creation of God.—*Ryland.*

GLORIFICATION.

There are three degrees of glorification. The first is in this life; and that is our sanctification, or transformation into the glorious image of God. The second is in the hour of death; when our souls are beginning to be brought to a nearer union with Jesus. The third will be in the last day, when both soul and body shall be glorified together; which is the highest step of Solomon's throne, and to which we must ascend by the former degrees.—*Bp. Cowper.*

GOD ALL SUFFICIENT.

What can we wish for in an heritage that is not to be found in God? Would we have large possessions? He is immensity. Would we have a sure estate? He is immutability. Would we have a term of long continuance? He is eternity itself.—*Arrowsmith.*

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Archer of Edward IV. Two pages. Porter.

ENGLISH HISTORY.

MANNERS AND CUSTOMS, AND MISCELLANEOUS PARTICULARS, FROM THE NORMAN CONQUEST TO THE DEATH OF RICHARD III.

In the preceding pages of this portion of English History repeated notice has been taken of matters connected with the laws, general polity, and military affairs. Some particulars connected with the manners and customs, and other subjects, require further notice.

In the first place, we may refer to

BUILDINGS.

The period which has been under consideration in this portion of the History of England, namely, from 1066 to 1485, is one of deep interest. It exhibits the country in a progressive state of advancement; and to this period may be traced the germ or origin of most of those discoveries, and of those arts and sciences, which have had the greatest influence in later times. Some of these we proceed to consider.

Among the various circumstances which influence the human character and habits, those connected with our dwellings are especially important, more so than might at first be considered. It is true that much of the progress of architecture is the result of progress in civilization, but the influence is reciprocal; and even in the most fertile lands, and the most favoured climates, where the accommodation and structure of habitations are rude and imperfect, mankind will be found proportionably in a state of barbarism.

Among the Saxons there was little improvement in domestic architecture. Indolent, and indulging in gross sensualities, neither the lord nor the serf cared for the rudeness of his dwelling, if the gratification of appetite could be secured. All ranks delighted in an abundance of food, and this procured for their nation the appellation of "Saxon swine;" but they cared not for elegance or convenience in their houses, which were, in many respects, scarcely better than those they constructed for their favourite animals.

When the Romans left Britain, the use of brick was laid aside: as stone could only be obtained in certain districts, the generality of dwellings were constructed of timber, with plaster or concrete occasionally added. The increasing desire to have magnificent structures for the purposes of religion, led to the erection of some more durable piles, conventual or episcopal, some of which yet remain; but these were not numerous, and the materials of which they were constructed were mostly furnished from

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the ruins of ancient Roman buildings. In many of our towns, if the remains of the earliest buildings, and even those of the twelfth and thirteenth centuries, are examined, it will be found that they were built of masses of rough stones, and Roman bricks, covered over with a cement or facing; where this has disappeared, the rude materials are shown that composed these structures, once elegant in outward form, and still interesting in their ruined state.

At the time when William seized the British sceptre, the buildings throughout England were chiefly masses of timber, and there were few or no castles or fortified dwellings to interrupt the progress of his soldiery. To this, among other causes, the rapid subjugation of England may be ascribed; and this fact, besides the general discontent evinced under their yoke, speedily led the Normans to feel the importance of securing their conquests by the erection of permanent places of defence. These were originally on the general plan adopted even in the times of the Romans, and presented a lofty tower, placed in a commanding situation, with thick walls, carefully secured from the entrance of a foe, by the absence of outlets, or even apertures, in the lower stories. Such is Coninsburgh Castle in Yorkshire, the walls of which still remain, and which, it is supposed, existed even before the Conquest, though it is with more probability considered as an erection of the Normans. "The Anglo-Saxon nobles," says an early historian, "squandered away their ample revenues in low and mean houses; but the French and Norman barons are very different from them, living at less expense, but in great and magnificent palaces." "William," says another writer, "excelled all his predecessors in building castles, and greatly harassed his subjects and vassals with those works." All his earls, barons, and even prelates, followed his example, and it became the first care of every one to whom an estate was given, to build a castle upon it. The dispute about succession, in the following reigns, kept up the spirit for building castles. In the turbulent reign of Stephen, it is stated, "every one that was able built a castle; so that the poor people were worn out with the toil of these buildings, and the whole kingdom was covered with castles." As already mentioned, 1115 castles were erected during the nineteen years of this king's reign. The Norman barons, who were then the land-owners of England, having no interest in common with their vassals, found such structures needful for their security against the Saxon natives, and also against their own rapacious countrymen. Among these predatory adventurers, as we have seen, every man's hand was almost literally against his brother; and whenever the king was a weak or despised character, the land was filled with violence, and the words of the prophet were applicable:—"They proceed from evil to evil, and they know not me, saith the Lord. Take ye heed every one of his neighbour, and trust ye not in any brother," Jer. ix. 3, 4.

During the period now under consideration, the ecclesiastical structures, especially the monasteries, were brought to what may be called their most perfect state, as the erection of them was supposed to be an effectual means of obtaining the pardon of sin and the favour of God. In the long reign of Henry III., we are told that 157 abbeys and other religious edifices were founded. The cathedrals of York, Salisbury, Litchfield, Gloucester, Ely, Winchester, and many others, were built during the thirteenth and fourteenth centuries, and give an idea of the style of sacred architecture which then prevailed, and of the expense in time, labour, and money bestowed on these fabrics. The popes, as may be imagined, favoured the erection and endowment of churches and convents, and in different ways, sought to increase their numbers. A detailed account of the various parts of a monastic building was given in the "Visitor" for January, 1837, to which the reader may refer.

When the castle became less necessary for safety or defence, mansions were erected as residences for the nobility and gentry; but these retained many characteristics of the stronghold. They generally consisted of a series of apartments, built round one or more courts; while the lofty corner turrets, garden walls, and a moat, rendered them in some degree defensible. Many of these yet remain, though improved by later additions and alterations.

During the fifteenth century little progress was made. The people of England were at that period employed rather in destroying than in building. Many castles were demolished during the civil wars, but very few were erected. We can form some idea of the desolating

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wars of these times, when we read that no fewer than sixty villages, within twelve miles of Warwick, some of them large and populous, were, with their churches and manor-houses, destroyed and abandoned. In such circumstances, very few improvements in architecture could be made. The taste for founding monasteries and churches also had received a check: this was owing partly to the unhappy state of the country, and partly to the diffusion of Wickliff's opinions, which raised doubts in many minds concerning the merit of these erections. Some beautiful structures, however, were erected in this period; among them we may notice King's-college chapel, at Cambridge.

The middle classes of gentry usually had their houses constructed upon one plan, although varying in their materials. In different parts of the kingdom, their dwellings were framed of timber, the intervals filled with plaster, or rough work of stones and mortar. Many of these still remain, and though some belong to a later date, they are very similar to those previously built. A passage extended from the front to the back of the dwelling; on one side was the hall with a parlour adjoining, above were chambers; on the opposite side were the kitchen, pantry, and various offices. Chimneys were unknown, except, perhaps, a vent bearing that appearance in the kitchen. If fires were kindled in other rooms, the wood smoke was left to escape at the various crannies and imperfect closures of the roof, windows, and doors. An old proverb said, that no house was wholesome where a dog could not creep in under the door, nor a bird fly in through the closed windows! Indifference to cleanliness, and to the removing of various offensive substances, often rendered this constant stream of fresh air absolutely necessary; and our ancestors sought for warmth rather by increasing their clothing, than by heating the air in their apartments.

Coals are first mentioned in a charter granted to Newcastle, by Henry III., in 1234. They gradually came into use in London and the southern counties, but through the whole of the period under our consideration, wood was preferred; and we read that the "nice dames" of London would not enter a room where sea-coal was burned, nor eat food dressed by any excepting wood fires.

One of the most ancient private buildings of the middle class yet remaining, is Winwall House, in Norfolk, represented in this engraving.

Winwall House, Norfolk.

The roof and some other portions are of later date than the main part of the structure.

In public or more important structures, walls were painted and ornamented, and the windows filled with coloured glass. Many specimens of these remains rival the productions of the present day, excepting as to the more improved state of the arts of design. The perspective of these scenes was always defective, and the figures miserably proportioned; but the colouring was brilliant, and the ornaments rich.

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FURNITURE.

The furniture was still ruder than the dwelling. The tables were generally heavy planks laid upon tressels; benches and stools served for seats; the beds were usually stuffed with straw or chaff. In some cases there were testers and drapery, and even curtains sliding upon rings. The bed-clothes were rough and coarse; but in a wealthy family, the drapery and coverlids of the principal beds were made of expensive materials, or richly worked. The walls of the chambers were rough and unfinished, but in the principal apartments they were covered with hangings of tapestry often very costly: in houses of less pretension the hangings were of cloth or canvas, painted with scenery of various descriptions; hunting-parties, battles, legends of saints, heraldic ornaments, and an endless variety of subjects suggested themselves to the artists.

The following inventory of furniture, and list of the rooms in the house of "Roger the dyer," an inhabitant of Colchester, as late as the reign of Edward I., proves how little our ancestors possessed, compared with what a family of the same rank would now desire. This list was set down when the articles were valued to ascertain his proportion of a tax in the reign of Edward I., and shows that humble were the possessions of men of business. It is as follows:—

"Roger the dyer had on Michaelmas day last, in his treasury or cupboard, one silver buckle, price 18d., one cup of mazer, (or maple,) price 18d. In his chamber, two gowns, price 20s., two beds, price half a mark, one napkin, and one towel, price 2s. In his house, one ewer with a basin, (probably of pewter,) price 14d., one andiron, price 8d. In his kitchen, one brass pot, price 20d., one brass skillet, price 6d., one brass pipkin, price 8d., one trivet, price 4d. In his brew-house, one quarter of oats, price 2s. woad ashes, price half a mark, one great fat for dyeing, price 2s. 6d. He had other property on his premises: item, one cow, price 5s., one calf, price 2s., two pigs, price 2s.—each 12d., one sow, price 15d., billet wood and fagots for firing, price 1 mark. Total sum 71s. 5d. The fifteenth of that, (the amount of the tax,) 4s. 9d." This sum would be far more difficult for him to pay than twenty times the amount in the present day to a person of similar situation in life.

The scarcity of articles of furniture makes a striking contrast to the inventories of our time, and the case was similar in the highest ranks. The earls of Northumberland and other wealthy nobles, who owned several castles and country residences, usually passed a part of the year at each, in order to consume the produce of their estates, for it was easier then for the proprietor to remove, than for him to bring his corn and cattle to his principal residence, or to obtain money by sending it to market. Yet the furniture possessed by one of these great families did not more than suffice for a single dwelling, and when the lord removed, his tables, beds, and plate, and other articles were carted with him. When we remember that roads, in our acceptation of the term, did not then exist, excepting upon the few lines constructed by the Romans, we may well conceive that the articles of furniture must have been strongly made to endure such carting; and that glasses and the elegant fragile articles of a modern lady's boudoir could not have existed. The figures represented in the tombs of Egypt show that the furniture and ornamental fittings of houses in that country, more than two thousand years before the period treated of in these pages, far exceeded those used by our ancestors whose history is now under consideration, and were very superior, not only in form but in quantity and variety.

DRESS.

We now proceed to articles of dress.

Many volumes have been expressly written upon this subject, and the numerous plates of costumes which have been copied from illuminated manuscripts, monumental effigies, and other sources, fully show the appearance of our ancestors during every reign.

The materials generally used for clothing were leather or woollen; linen was confined to the higher and middle ranks; silk was scarcely known; that inestimable blessing, the fabric of cotton, belongs to a much later period; furs were worn by all who could afford to purchase them. The common articles of dress were shirts covered by cassocks or tunics, or jackets, with petticoats, trowsers, or tightly fitting garments called hose. As for the variety of forms which these assumed, it is useless here to attempt a detail of particulars. Suits of apparel have been changeable in every age of the world, and the absurdities of fashion have ever presented a subject for the reprehension of the divine and moralist, from the days of the prophets. Thus Isaiah notices "the changeable suits of apparel, and the mantles, and the wimples; and the fine linen and the hoods, and the veils;" also Jeremiah inquires, "When thou art spoiled, what wilt thou do? Though thou clothest thyself with crimson, though thou deckest thee with ornaments of gold."

A few of the fantastic forms in which our ancestors disguised themselves, are represented in the engravings, on pages 361 and 364. If they appear displeasing to us, we may be assured that the dress of our modern fashionables would not have been less so to them.

The colours of the dresses of the wealthy were more glaring than those hues which are most approved now, when most of our male population may be said to be clothed only in various shades of black and blue. Gold and silver ornaments, and jewels also, were constant appendages of rank and wealth in both sexes. A robe of Richard II. is spoken of as having cost thirty thousand crowns. In that reign, probably, foppery reached its height, and the description of a fashionable by Chaucer's "person" or clergyman, enters into some particulars. Speaking of the superfluous expense, he describes it as proceeding from "the cost of embroidering, disguised indenting, barring, crowding, paling, winding, or bending, and semblable waste of cloth in vanity. Also the costly furring in gowns, so much pouncing of chisel to make holes, so much dagging of shears, with superfluity in length of the gowns, trailing in the mire, on horse as also on foot, as well of man as of woman." He describes the hose, or lower garments of the men, rebuking "the horrible disordinate scantness" in very strong language, and "they part their hosen in colours, as white and blue, white and black, black and red, and so forth." He further notices the "outrageous array of women." We must not say much for the becoming form of modern garments, or their convenience, although they are not quite so unseemly as in the days of Chaucer; but the cleanliness which their materials admit and require, may well reconcile us to the disappearance of the shabby and dirty finery of the more picturesque dress of our ancestors. And that the greater part of their apparel would be of this description, is evident, when we consider their original costliness, and the durability of the materials.

FOOD.

Food next requires attention. The main articles of nourishment always will remain the same, but the pampered appetite of man often refuses it in the simple and most wholesome forms, and craves the excitements of novelty and stimulating additions. The national taste of England, through the whole period now under consideration, and even to the present day, has been that of our Saxon ancestors: plain joints of animal food, with bread and other preparations from corn, have formed the main articles of sustenance to those who could afford to procure this diet, and who were not under the influence of foreign fashions. After the Conquest, these innovations became more frequent, though the Normans were not averse to the enjoyments of the table, and to a certain extent adopted the profusion as to meals, customary in the land they invaded. The reign of Richard II. probably afforded more scope for the display of "the art" of cookery than any other. It is recorded, that at one time two thousand persons were employed in his kitchen in the various branches of the culinary office; and a singular document has been preserved, which records the results of their talents

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and inventive powers. "The Forme of Cury," is the title of a cookery book still in existence, compiled by the kitchen professors of this extravagant and foolish monarch. Two receipts from it will convey to the reader instructions by which he may, if he thinks fit, indulge in some of those luxuries, the results of which led to the deposition and untimely death of this wretched king; and that this may the easier be done, the recipes are presented in modern spelling. "Egurdouce. Take rabbits or kids and smite them in pieces raw, and fry them in white grease; take currants and fry them, take onions, parboil and hew them small, and fry them; take red wine, sugar, with pepper, ginger, cinnamon, salt, and cast thereto, and let it seethe with a good quantity of white grease; and serve it forth."

"Mawmanny. Take cheese, and of flesh of capons or hens, and bruise them small in a mortar, take milk of almonds, with the broth of fresh beef, and set them on the fire. Thicken it with flour of rice, or fine bread, or fine wheat flour, as stiff as blank desire, and with yolks of eggs and saffron to make it yellow, and when it is in the dish, stick cloves, and strew powder of galengale over it, and serve it forth."

The odd mixtures in many of the made dishes, which form most of the receipts, would excite disgust in the modern epicure. "Tartee," seems to have been a sort of patty. "Take sodden pork, bruise it, put eggs thereto, raisins, sugar and ginger, sweet powder, and small birds, and white grease; take prunes, saffron, and salt, make a crust, put it thereon, and serve it forth." Another patty has thrice the number of ingredients, and a salad has fourteen. One of the most simple dishes is literally cold boiled pig. "Take pigs, quarter them, and boil them in salt and water; let them cool, take parsley and sage, and grind it with bread and yolks of hard boiled eggs; mix it with ginger, lay the pig in a vessel, pour on the liquor, and serve it forth."

The principal meals were dinner, about eleven o'clock, and supper about five, the lower classes taking their meals about an hour later. In the large families of the nobility, the rations, excepting on festival days, were delivered out separately to my lord and lady, to the nursery, and to the various classes of retainers, with the same precision as to quantities as is adopted in modern public establishments. The house-book of the Northumberland family states the quantities to be supplied to each, and gives a full account of every process in housekeeping, all which were regulated by "the council," or chief officers of the establishment, even to the right making of the mustard. This was an important article, when for a great part of the year the food was chiefly salted beef and fish, and one hundred and sixty gallons was the yearly supply. The scarcity of winter fodder rendered it necessary to kill the cattle, intended for winter consumption, at Michaelmas. The breakfasts, even to my lord and lady, and the nursery, were composed of boiled salted beef and mutton, salt fish, sprats, herrings, buttered eggs, brawn, with bread, both fine and coarse, beer and wine. On festive or public occasions, more rare and expensive articles were served up, with "subtilties," or dishes of paste and jelly, in various forms and devices, castles, ships, knights, ladies, and forms of animals, with mottoes, gilding, and various ornaments. A peacock roasted, and then decked with its plumage, was a dish for a solemn occasion, and when it appeared, the knights were often excited to make vows, "before the peacock and the ladies," to perform some great undertaking. Mackerel, powdered with sugar, is described as "a dish for a lord;" also roasted pigs, adorned with gold and silver leaf.

On public occasions coarse hospitality was freely displayed. On one of the visits of the king-making Earl of Warwick to London, six oxen were consumed daily for breakfast at his house in Warwick-lane; but in general, and when in the country, a different course was pursued, as is shown by the Northumberland house-book. In this family there were one hundred and sixty-six persons, including children and servants; and there was a daily average of fifty-seven strangers; but the provisions were such as described above, and poultry and game were expressly confined to my lord's table: vegetables are scarcely mentioned. "The roast beef of old England," evidently was almost, if not quite unknown, and one quarter of malt was the allowance for two hogsheads of the beer. The cookery was not elaborate; two cooks dressed the food for the whole family of more than two hundred persons, while eleven priests, and seventeen

chanters, etc., were employed on the same establishment. A coarse cloth was used for covering the tables, but it was only washed about once a month. Sheets were not used, most of the servants slept on benches, or on the floors, or in a sort of box partly filled with straw; and the whole yearly expense for washing did not exceed forty shillings. Three times in the year the family removed, that the provisions stored at the principal seats might be duly consumed. Seventeen cars and one wagon conveyed the whole furniture, including bedding; while one cart was enough for all the utensils for cookery and kitchen furniture, with the bedding for the cooks.

We may here introduce an account of the actual expense of a breakfast given by a nobleman in 1289, when on a journey from Oxford to Canterbury. It was a sort of public breakfast for "knights, clerks, and esquires," given in Lent, which accounts for the absence of flesh meat. Bread, 2s.; beer, 1s.; wine, 3s. 8d.; half a salmon, with the chine, for the principal dish, 3s. 8d.; a fresh conger eel, 3s.; three fat pikes, five fat eels, and twenty-seven fat roaches, 12s. 4d.; half a hundred lampreys, 1s.; oysters, 3d.; vegetables, 2d.; the hire of a boy to assist in preparing the breakfast, 1d.; a basket, 1½d.

It would be endless to attempt enumerating all the varieties of bread, from the wassal and manchet bread, made of the finest flour, to the bread of treet, corresponding with our household bread; also barley bread, and maslin bread, of barley, wheat, and oats mixed. Beans and other coarse materials were made into a bread for horses, and in times of scarcity the poorer classes were glad to obtain it. The imperfect knowledge of cultivation, and the uncertainty of seasons, often produced scarcity, when there was little or no opportunity to find substitutes for corn, and the prices varied exceedingly. In 1317, wheat was 6s. 8d. the quarter; before harvest it had been 80s., equal to more than 20*l.* at the present day. In the eleventh year of Edward III., wheat brought only 2s. per quarter. The farmers sold all their corn soon after harvest; and if the supply was short, from any cause, it soon became exhausted, and then the poor were driven to the most miserable substitutes, and died by thousands, literally from starvation. No idea can be more false than that the period from the Conquest to the end of the civil wars was a happy time for the poorer classes. In a time of plenty, food was abundant, but they were harassed by hard servitude and cruel oppression, and years of dearth frequently occurred, when there was little or no charity to be obtained. Doles were frequently given at the gates of the monasteries; and ecclesiastics and nobles sometimes gave freely to the poor; but when the time of scarcity came, all the food that could be obtained was needed for their own establishments, and the poor man had no resource. On several occasions, the scholars at Oxford and Cambridge were sent home on account of the difficulty in procuring sufficient food for their support.

Matthew Paris, a Benedictine monk, describes a dearth which occurred in 1288, in his own times, particularly. Hunger and deadly sickness prevailed every where, the poor died from want of food in many places; there was little disposition to assist those in need shown by the rich, and a most shameful want of charity displayed by the prelates and dignitaries of the church. He relates instances of covetousness in the Archbishop of York, and a priest of that diocese, and gives marvellous circumstances, added by the superstitious feelings of the times. The poor suffered more and more severely till the month of July, when they crowded into the fields and plucked the ears of unripe corn, seeking thus to prolong their miserable existence. How widely this statement of facts by one who himself was an ecclesiastic, differs from the visionary statements as to the manner in which the poor were supported by the Romish clergy, and abounded in the necessaries of life. More than twenty thousand persons died from want in London alone in this famine. When these seasons of dearth came, the poor were obliged to use the bark of trees, the flesh of dogs and horses, and the most disgusting substances for food. Pestilence soon followed, and then the people died by thousands, even though plenty had returned. In the prisons, those who were confined are said to have fed upon the bodies of those who died, and even to have slain a part of their number for food.

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ROSE AND CROWN LANE:

OR,

A SKETCH OF MY NEIGHBOURHOOD.—No. IX.

I BELIEVE there is not a house in our row, perhaps there is not a family in any other row or town whatever, that does not furnish to an attentive observer some specific lessons of instruction, or illustrate some important principle that may and ought to be wisely improved for purposes of practical utility. I seldom enter No. 9, without picking up a hint—I am sorry to say oftener by way of contrast than of example—as to the management of children. The ground floor is occupied by an elderly matron named Rogers, who has long been famous as the mistress of a dame, or, as it is called in our neighbourhood, a ma'am school. The old lady is commonly called Ma'am Rogers. The children, when speaking of her, call her their ma'am; and it is not an unfrequent threat, in the midst of their out-of-school quarrels, "I'll tell your ma'am of you, that I will." But ma'am or dame schools are almost obsolete. Among the many improvements of the present day, infant schools have as nearly superseded dame schools, as the steam-engine and power-loom have taken place of the spinning-wheel and hand-loom. Perhaps the next generation will read, as a matter of curiosity, a description of the operations of either; and the lines of Crabbe, which now present a vivid picture of that which here and there still exists, but is hastening to decay, will then be regarded with the kind of interest we feel when inspecting paintings or models of Roman edifices in ruins.

"To every class we have a school assign'd,
Rules for all ranks, and food for every mind;
Yet one there is, that small regard to rule
Or study pays, and still is deem'd a school;
That, where a deaf, poor, patient widow sits
And awes some thirty infants while she knits:
Infants of humble, busy wives, who pay
Some trifling price for freedom through the day;
At this good matron's hut the children meet,
Who thus becomes the mother of the street.
The room is small, they cannot widely stray;
The threshold high, they cannot run away:
Though deaf, she sees the rebel hero shout;
Though lame, her white wand nimbly walks about:
With band of yarn she keeps offenders in,
And to her gown the sturdiest rogue can pin;
Aided by these, and spells, and tell-tale birds,
Her power they dread, and reverence her words."

The school-room of Ma'am Rogers is in a great measure filled by children of the age here described; but not exactly from the very humblest class of society. Time was when at the busy seasons of hay-making, harvest, or hop-picking, the village dame-school was thronged by the little ones of some dozen or score of mothers, who sent them there to gain release for their field employment, by which they could clear enough to pay for their children's schooling, and over and above to provide themselves with tea and sugar. These were occasional scholars. The children of the laundress and charwoman were constant attendants; for their well-practised mothers seldom had a day at home, and therefore found it answer better to pay sixpence a week for their schooling, than twopence a day. Ah, those were halcyon days for Ma'am Rogers! She had as many scholars as ever her room would hold; and she lived then in a cottage, the rooms of which were twice as large as those in Rose and Crown lane; and for children under five years old, her pay was just the same, whether they learned anything or nothing. There was a small profit also on the books which she furnished to those who were advanced in scholarship to ab, eb, ib, ob; and then there were her upper scholars, of whom she was not a little proud; girls of five years old and upwards, who, at a small advance of price for each several accomplishment, were taught reading, spelling, and rehearsing poetry; also needlework, fancy work, and marking. She could mention several, and she does so to the present day, who finished their education at her school, and who are now very well to pass in the world; but times are strangely altered. Her daughter, who long conducted the higher department of teaching, is married and gone far away. The old lady begins to admit that it tries her eyes to count the threads of cloth or canvas, so stitching, hem-stitching, marking, and worsted work, are well nigh abolished; though she still maintains that they were at one time taught in her school as well as in any boarding school whatever, and that she could teach them now, only people are not willing to pay. Besides, there is the Infant school and there is the British school set up now; and, despite of all the good dame's representations of the superior advantage of children being taught by a proper person, who has been used to it all her days, to the new plan of a parcel of children being set to teach one another, and get their learning in play, most of the parents, in our neighbourhood, seem disposed to prefer availing themselves of the new institutions.

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Ma'am Rogers, like many of her sisterhood, would therefore be compelled to seek some other means of subsistence, were it not for a few adherents of the old system, who still choose to send their children where they please, without being beholden to anybody, and where they can attend regularly or irregularly, learn or not learn, and be corrected or not corrected, without any committee to trouble their heads about it. To Ma'am Rogers are committed in consequence some twenty or thirty children, whose parents "can afford to pay for their schooling," and whose mothers being engaged with a shop, or the care of a young infant, or household business, find it a relief to be freed from the hinderance, noise, and mischief of children from two to six years of age. As a part of the privilege connected with being able to pay for her children's schooling, each mother considers herself entitled to prescribe the system of education to be pursued. One desires that her child may be brought on with its learning; another would not wish hers to be much teased about it, so that it is but kept out of mischief; the great matter with a third is, to make her child behave prettily in company; one will have hers kept very strict, and made attentive; and several insist that theirs must not be crossed, as their health is delicate, and they are meek-tempered children, and cannot bear to be contradicted.

On meeting her little group, it is the old woman's daily endeavour to adapt herself to all these various and perplexing requirements, and in every instance to produce "exactly the job that her customers choose." The young votaries of learning are laboriously drilled in the repetition of unmeaning monosyllables, dragged on to the high attainment of reading a chapter in the Bible, and made to drawl or sing out the lofty speeches of heroes and orators. All these various exercises being to them alike uninteresting and unintelligible, during all the process, the mind of the child has received no culture; no real improvement has been effected, nor have any just ideas been communicated; but by the habit of early association, learning is connected, either with the rod, the dunce's cap, and the bitter tears that soaked the leaves of the primer; or with the sugared bribe, the elating applause, that stimulated or rewarded the first attainments in literature. But though the child is no ways benefitted by such an initiatory process, the self-approving governess has to communicate to the satisfied mother the result of her labours. "Master H——, five years and a half old, can read the Bible, and repeat Pope's Universal Prayer, Douglas to Lord Randolph, Cato's Soliloquy, and Gray's Elegy in a Country Church Yard." This testimonial is exhibited to admiring visitors. Master H—— is rewarded for his diligence with a plum-cake, a whole holiday, or money to squander as he pleases; a couple of fowls, a griskin, or some similar present, is sent by way of acknowledgment to the governess; the fame of her methods for bringing on children with their learning is conveyed to all relations, friends, and neighbours, who are likely to be on the look-out for a school for their little ones; and all parties are well pleased with themselves and each other.

Those children, whose parents restrict them from close application to books, are allowed nevertheless to thumb and destroy them. This is a bad habit. I have often remarked, and no doubt many other persons observant of the ways of children and the formation of habits, have noticed the same, that children who, before they can read, are suffered to make playthings of books, almost always grow up careless and desultory in the use of them. They leave them about to be injured or lost, and scarcely ever have patience to read one through. They seem, indeed, hardly to understand the proper use of a book. I wish my neighbour, the schoolmistress, were aware of a better method of dealing with her little pupils with regard to books, by which they would cease to be objects of terror and disgust to that class of children who are to be stimulated to learn, or degraded into mere play-things by those who are not to be forced to apply. It is a delicate matter to attempt to teach one who has been upwards of thirty years a teacher of others, or I would venture to suggest to the old lady a plan which I have found very successful with my own children. They were not hurried on to acquire the merely mechanical power of reading before they had, from observation, acquired a pretty extensive knowledge of common things, and until they were aware, from seeing books used by those who could understand them, that, in some way or other, they opened a source of enjoyment,

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which it was desirable for them to possess. Short and interesting stories were read to them, from the Bible and other suitable books. When questions were proposed, books were sometimes resorted to as furnishing an answer; and one of the children on some occasion incidentally remarked, "It was when mother was talking with her book." From detached ivory letters, the children were taught the sound of the vowels. They were next exercised with a consonant prefixed to the vowels; not being taught to spell the syllable *b*, *a*, *ba*; but merely to read it, *ba*, *be*, *bi*, etc.; and at the close of each lesson, the same letter or syllable was pointed out in a printed book, and also written with a pencil on a piece of loose paper. Thus the child was preserved from the mistake of confining the sound of the letter to the identical bit of ivory from which he first learned it; and also the connexion of letters and words with reading and writing was kept constantly in view. At this time he was not allowed to handle the book. This rule was found useful, not only in preserving the book from destruction, and the child from the bad habit above mentioned, of regarding books as playthings, but also as a stimulus to attention and diligence, in looking forward to being able to read in a book, being permitted to hold a book in his own hand, or to have a book of his own. Thus he was taught the long sound of the vowels, alone, and with a consonant prefixed; being allowed only the vowels and the consonant of which the lesson consisted, or those he had already learned. The bringing out a new consonant was considered as taking a degree in learning, and was made the reward of attention and diligence. When this was thoroughly mastered, he learned the short sound of the vowels, by prefixing them to the consonants.

When we proceeded to three letters, the child was much encouraged by often finding the name of some object with which he was familiar, as, *boy*, *bag*, *cat*, *dog*, *cow*. The word was still shown to him, formed with his ivory letters, printed in a book, written with a pencil, and sometimes accompanied with a picture, and a little simple story in which the word occurs was read or repeated to the child. Long before this he was taught from his mother's lips most of the Nursery Rhymes, and Dr. Watts's Divine Songs for Children. At this stage of his progress in learning to read, the books containing those delightful little poems were first produced. One of his favourite ditties was read to him, and in it one or more of the words he had just learned in his reading lesson were pointed out. Thus he began to comprehend the connexion of reading with agreeable knowledge; the pleasure he enjoyed proved a sufficient stimulus to his persevering endeavours, and his progress was quite as rapid as could be wished. Bribes, threats, and tears were proved to be altogether unnecessary accompaniments of learning to read. Many other parents and instructors of young children have found similar methods equally successful; but it is not exactly the beaten track by which we and our forefathers traced our weary steps up the steeps of learning; and I suppose Mrs. Rogers and many other of her sisterhood would pronounce it a thing impossible that children should be taught to read except in the regular, old-fashioned method; and by the powerful aid of sugar-plums, rods, and dunces' caps. Subsequent instructors, however, find the little pupils, who have been trained on such a system, really far more backward and unteachable, than if they had never professedly been taught at all. Their difficulties are greatly aggravated, and their progress very much impeded by the labour of *unlearning*.

I fear the moral discipline of my neighbour is not conducted on principles much more sound and judicious than her literary instructions. The appearance of things is much more regarded than the reality. Indeed, I very much suspect that the old lady entertains the common, but most erroneous idea, that little children have no real character of their own, but are to be taught to practise a set of mechanical acts that "look pretty," and that some how or other the good dispositions, of which these acts ought to be the indication, will in time spring out of them. Hence the common inducement presented to the children to do what is right in itself is, How it will appear to others. If a little one is unwilling to have his hands washed, "Come," says the dame, "be a good boy and have your hands washed. If any ladies should call, what would they say to see you with such dirty hands!" Another is persuaded to learn his lesson with the promise that if any visitors come, they shall hear how well he can say it. The care-

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less and disobedient are threatened with exposure:—"I expect somebody here to-day, and I will certainly tell of you, that I will." And quarrels are thus suppressed,—"Hark! who is that at the door? A pretty thing, if Dr. B., or Mrs. C. should come in and catch you quarrelling!" The old woman seems to forget that in calling to her aid all these real or imaginary personages, she loses her own authority; while, by enforcing what is right, upon false principles, no good disposition is cultivated in the children, nor any bad one corrected.

A still worse part of her system is the employment of deceptive terrors. The children are taught to believe that she keeps an old man, who looks down the chimney, and is ready at her call to fetch away any naughty children. Almost every day the pretence is adopted of calling him down to fetch away naughty Tommy or naughty Sally; and when the spell has awed the little offender into stillness and submission, hastening to countermand the summons,—"Old man, you are not wanted now; Tommy, or Sally, will be good without you: you must come and see whether they are good tomorrow." By this foolish and wicked practice, incalculable injury is inflicted on the health, the minds, and the dispositions of the children. The timid are agitated and distressed by false terrors, their spirits are broken, their tempers soured, and they are unfitted for meeting the real troubles of life. And if some shrewd children see through the trick, and despise the imposition, it teaches them to disregard rightful authority and to practise deceit.

I have occasionally ventured to remonstrate with Mrs. Rogers on the impropriety and sinfulness of these expedients; but she is fully persuaded that no other method would be half so efficacious in making the children mind; indeed, she is certain that it would be impossible to go on without it;—it saves them many a beating, and answers at once for those whose parents wish them to be kept very strict, and for those on whom she dare not lay her hand. I wish she could be made to understand how much more easily and effectually children may be managed by a gentle, firm, and well-regulated authority; never requiring of them any thing but what is right and reasonable, and never giving up a point; never capriciously refusing them an innocent and suitable gratification, nor yielding an improper indulgence to gratify their passion and self-will: at first training them to obedience, as a matter of course, without any reference to the opinions of others; and as soon as they begin to be capable of understanding, teaching them to obey those who are set over them, and in every respect to do what is right as a matter of duty—an act of obedience which God requires of them. But I fear my neighbour has little idea herself, and therefore is not likely to teach her children how religion should be incorporated with, and give direction and vitality to every action of life, whether great or small. And yet she reckons herself a very religious woman, and often speaks of her children receiving religious instruction. True, she is particular in an outward attendance on the means of grace; and every Saturday the children are made to repeat their catechism, like a set of parrots. And in all this she thinks she has done her duty to God and her charge, considers herself a great benefactor to the rising generation, and expects to be rewarded with heaven at last. Oh that her mistakes were corrected, both for her own sake, and that of the children committed to her charge. It is to be hoped that many persons in a like situation are more enlightened than Mrs. Rogers, and act on better principles; but if her system of education were universally adopted by dame school-mistresses, as it certainly is by too many, it is no matter, for the sake of the rising generation, how soon the race is extinct.

I have scarcely left room to say that Mrs. Rogers's up-stairs apartment is occupied by a decent respectable person, called Nurse White. This pious woman is in high repute among the ladies of our neighbourhood, and she merits the good will and favour she enjoys. She possesses an intelligent, observant mind; an active, obliging, cheerful disposition; a spirit of conscientious piety; and is remarkable for her careful and successful management both of her mistresses and their infants. There are two particulars in which she also differs from many of her race, but in which she presents an example worthy of their imitation, especially that of those who profess like her to be actuated by the principles of piety. One is her generous disinterested integrity, which leads her to abhor the thought of grasping and coveting from her employers more than a fair remuneration for her services; or

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of taking advantage of the absence of a mistress to indulge in extravagance and waste. So far from this, she constantly practises a careful frugality; and, if she can prevent it, will not suffer the servants unnecessarily to consume a single article, but endeavours to impress upon them the duty of doing as they would be done by, and taking especial care of their mistress's property when she is not able to take charge of it herself. Such fidelity does not go unrewarded. The employers are thus enabled, and they are generally inclined, the more liberally to requite her services; and what she thus obtains she can enjoy with a good conscience and real satisfaction of mind. It is generally supposed that she has laid by sufficient to support her comfortably in old age, if she should be unable to work. Nurses who are extravagant and self-indulgent in the houses of their employers, however much they may gain, seldom make a provision for old age. They get into such habits of luxury, that they cannot practise frugality at home, but waste all their gains upon expensive clothes and luxurious living during the intervals of their employment; and when they are no longer capable of pursuing their calling, they sink into poverty, and are dependent on charity or a parish provision.

The other feature of Nurse White's character, which is not very common among persons of her profession, is her willingness to be told, and to correct mistakes. Some people are too self-conceited and prejudiced to admit themselves capable of error, or susceptible of improvement. Such persons will never excel in any pursuit, and the greater their confidence in themselves, the less likely are they to gain or to deserve the confidence of others. The good woman of whom I am speaking never hesitates to say: "When first I went out to nursing, it was the custom to do so and so; but a medical gentleman explained to me that it was improper; and now I manage differently." I have heard her speak of tightly rolling several yards of calico round the body of an infant; of putting spirits or other strong liquors in the food of both mother and child under an idea of imparting nourishment and comfort; of giving laudanum or other drugs to children to make them sleep; and of cramming them with a quantity of food that they could not digest: all these practices she has been convinced were highly injurious, and she has conscientiously abandoned them. I am certain that nothing could induce her to give a child a drop of anything whatever, unless she knew from good authority that it was not injurious, but beneficial. Many nurses do not scruple, for the sake of saving themselves fatigue, to give sleepy doses, without the knowledge of the parents or medical man, and often to the great injury of the child. I well remember one, who on her dying bed spoke with remorseful feelings of the consciousness of having done so, and the fear that it had in some instances been fatal in its effects. All nurses as well as other people are liable to mistake. It would be well for their charge and honourable to themselves, if, like Nurse White, on having their errors pointed out, they would conscientiously abandon them.

As Nurse is but little at home, she kindly permits an old neighbour, Betty Mason, to live in her room, and keep her bed aired. Betty is an honest cleanly creature, and has every thing in nice order. It is hoped, too, that she is a pious woman; and as Mrs. White observes, it is a comfort when she comes home to find some one to talk to, who speaks and feels in her own way; and who likes to read the Bible and other good books. The accommodation, however, is mutual; and I wish Betty Mason were more ready to acknowledge that it is so. It is a great matter to her to live rent free. If she did not, as she is lame, and not able to do much work, she would most likely be forced to go to the poor-house; but with this help, and a trifle which one Christian friend or another, from time to time, allows her, she might do pretty comfortably. But I am sorry to observe she is of an ungrateful, fretful, grudging disposition; and none who are so can be happy, let them have what they will. I have more than once heard her say, when Mrs. White's kindness was alluded to, "Oh, she can afford it; she gets plenty of money; half-a-crown for a courtesy; I wish I was as well off as she is!" If a friend calls on her, instead of being grateful for what is brought, she is more ready to complain that it is so long since the last call; and if she knows of a visit being paid to any other poor person, she is almost sure to insinuate that that individual is very well off, or at any rate not half so much in need as she is. All this

is very offensive and very sinful; and so much the worse in one who we hope is not a stranger to religion. For my part, I almost wonder how Mrs. White and her other friends can have patience to put up with her discontented spirit; but I suppose they have learned forbearance from Him who bears so long with us and who teaches us to be kind to the evil and the unthankful. Well, I hope this kindness will not be lost upon Betty Mason, but that she will learn humility and gratitude; and feeling her great unworthiness, will wonder at the mercies she enjoys; and gratefully own the kindness of her friends and the rich and undeserved goodness of God. She will thus lead a much happier life, and walk much more consistently with her Christian profession.

METHOD OF TRANSFERRING TO PAPER THE FORMS OF LEAVES.

Take a piece of good cartridge paper, large enough to include the whole of the largest leaf to be transferred; let this be well covered with printers' ink by means of a sponge or piece of cloth, taking care to make the paper equally black all over, and leave on as little ink as possible; then place the leaf with its *under* face (because there the veins are more prominent) upon the blackened paper, and upon the leaf place a few sheets of paper over all. Perform briskly the operation of rubbing, and when the leaf has sufficiently taken the ink, lay it carefully on a piece of white paper; cover and rub it as before, being at the same time very careful not to alter the position of the leaf in the slightest degree, which would spoil the impression. Remove carefully the papers from above, lightly raise the leaf, and you will find a beautiful fac simile, to produce which with a pencil, would require much time and skill. The same leaf will yield twenty or more impressions, and the early ones are by no means the best.

In this manner an admirer of the variety and beauty of nature may, even without a talent for drawing, become possessed of a correct representation of the leaves to which he may have access; and the very operation will make on the mind an almost indelible impression of the peculiar form of every leaf. A book composed of such copies, would be not only amusing and instructive, but highly valuable as a work of reference for the identity of a plant.

REMARKABLE CONVERSION.

It would indicate, says Mr. Wilberforce, a strange insensibility to the ways of a gracious Providence, if I were to suffer the circumstance of my having Dr. Milner for my fellow-traveller to pass without observation.

Wishing for an intelligent and agreeable companion, I requested my friend Dr. Burgh, of York, to accompany me; a man of whom it is difficult for me to speak with moderation, full as my memory must ever be of marks of a kindness that could scarcely be exceeded, and of a disposition always to forget himself, and to be ready to conform to his friends' wishes. A fund of knowledge of various kinds, great cheerfulness of temper, and liveliness of fancy, rendered him a delightful companion. But he had qualities also of a higher order—an entire conviction of the truth of revelation; a considerable acquaintance with ecclesiastical history; just principles of religion; and as affectionate a heart as ever warmed a human bosom; with a continual promptitude to engage in every office of benevolence; but the habit of associating with companions, and living for the most part in society, which, whatever might be the opinion assented to by the understanding, exhibited no traces of spirituality in its ordinary conversation, had induced a habit of abstaining from all religious topics in his common intercourse, and even an appearance of levity which would have prevented his being known, except by those who were extremely intimate with him, or rather by those who being themselves also religious were likely to draw forth his secret thoughts and feelings, to have any more refleetion than that average measure for which we are to give people credit, whose only visible attention to religion consists in their going to church on a Sunday. A gracious Providence prepared him, I doubt not, by a long illness, for that change which he was to experience much sooner than could have been anticipated from the uncommon strength of his constitution, and the temperance of his habits; but had he been my fellow-traveller I should never have benefitted by him in the most important of all concerns; indeed, I am persuaded that we neither of us should ever have

touched on the subject of religion except in the most superficial and cursory way.

To my surprise, Dr. Burgh declined accepting my proposal, and I next invited Dr. Milner to accompany me, chiefly prompted by his acknowledged talents and acquirements, and by my experience of his cheerfulness, good nature, and powers of social entertainment. It was the more important to me to secure such a fellow-traveller, because we were to have a tête-à-tête in my carriage; the ladies of my party travelling with their maids in a coach. It is somewhat curious that, as I learned accidentally long afterwards, my grandfather had declared that in after-life I should go abroad, with Isaac Milner as my tutor.

I am bound to confess that I was not influenced to select Dr. Milner by any idea of his having religion more at heart than the bulk of our Cambridge society; and, in fact, though his religious opinions were the same as his brother's, yet they were then far from having that influence over his heart and manners which they subsequently possessed; though it is due to him to declare that his conduct was always what is called correct, and free from every taint of vice; and he had a warmth of benevolence which rendered him always ready to every good work. I must go further: had I known at first what his opinions were, it would have decided me against making him the offer; so true is it that a gracious hand leads us in ways we know not, and blesses us not only without, but even against our own plans and inclinations.

The recollections which I had of what I had heard and seen when I lived under my uncle's roof, had left in my mind a prejudice against their kind of religion, as enthusiastic, and carrying matters to excess; and it was with no small surprise I found, on conversing with my friend on the subject of religion, that his principles and views were the same with those of the clergymen who were called Methodistical; this led to renewed discussions, and Milner (never backward in avowing his opinions, or entering into religious conversation) justified his principles, by referring to the word of God. This led to our reading the Scriptures together, and by degrees I imbibed his sentiments; though I must confess with shame, that they long remained merely as opinions assented to by my understanding, but not influencing my heart. At length, however, I began to be impressed with a sense of the weighty truths which were more or less the continual subjects of our conversation. I began to think what folly it was, nay, what madness, to continue month after month, nay, day after day, in a state in which a sudden call out of the world, which I was conscious might happen at any moment, would consign me to never ending misery, while at the very same time I was firmly convinced, from assenting to the great truths taught us in the New Testament, that the offers of the gospel were universal and free, in short, that happiness, eternal happiness, was at my option.

As soon as I reflected seriously upon these subjects, the deep guilt and black ingratitude of my past life forced itself upon me in the strongest colours. I condemned myself for having wasted my precious time, and opportunities, and talents; and for several months I continued to feel the deepest convictions of my own sinfulness, rendered only the more intense by the unspeakable mercies of our God and Saviour, declared to us in the offers and promises of the gospel. These, however, by degrees produced in me something of a settled peace of conscience: I devoted myself, for whatever might be the term of my future life, to the service of my God and Saviour; and, with many infirmities and deficiencies, through his help I continue until this day.—*From the Life of Wilberforce.*

CHRISTIANITY.

The defensive armour of a shrinking or timid policy does not suit Christianity. Her's is the naked majesty of truth; and, with all the grandeur of age, but with none of its infirmities, has she come down to us, and gathered new strength from the battles she has won in the many controversies of many generations. With such a religion as this, there is nothing to hide. All, all should be above board. And the broadest light of day should be made fully and freely to circulate throughout all her secrecies. But secrets she has none. To her belong the frankness and the simplicity of conscious greatness; and, whether she grapple with the pride of philosophy, or stand in fronted opposition to the prejudices of the multitude, she does it upon her own strength, and spurns all the props and all the auxiliaries of superstition away from her.—*Dr. Chalmers.*

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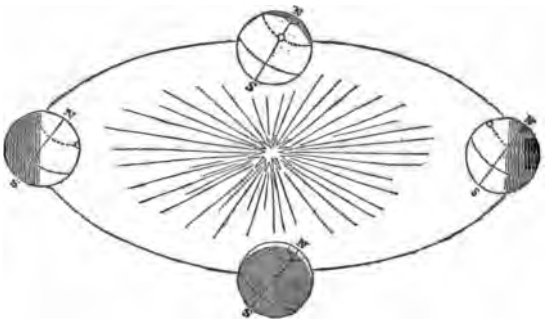
March 20.



June 21. December 21.

September 23.

EXPLANATION OF ENGRAVING.

N. S. Represents the axes of the Earth: N, the North Pole; S, the South Pole.
The small circle near the North Pole shows the arctic circle.
The dotted circle shows the latitude of England.
England is shown in the three upper figures by a circular dot, thus O.
The lower circular line represents the equator.
The Sun is in the centre of the diagram.
In looking at the engraving, the reader is supposed to be above the plane of the earth's orbit, which is shown by the curved line.

THE SEASONS.

In scarcely any country do the changes of the seasons appear more prominently than in England. Spring, Summer, Autumn, and Winter, succeed each other, bringing with them their diversified comforts, suited to our conditions; and yet how little is thought of this inestimable blessing! Without these changes day and night would be equal over the whole globe; the same season would perpetually reign. In our latitude, there would be a constant and cold spring; the parts about the equator would be exposed constantly to the burning heat of a vertical sun, while, as we approach the poles, perpetual winter would destroy all vegetation.

If the earth's axis were perpendicular to the plane of its orbit, there would never be any considerable variation in the climate of any country on the earth; but the inclination of the axis to that plane, and its maintaining its parallelism throughout its orbit round the sun, causes a variation in the earth's position, with respect to the sun, which produces that important phenomenon, the vicissitudes of the seasons.

The diagram at the head of this article is intended to represent the earth in four positions in its orbit.

The line N S in all cases being the earth's axis inclined, and always parallel to itself. The eye is supposed a little elevated above the plane of the orbit.

The orbit of the earth though an ellipse, differs, however, but little comparatively from a circle. The earth is at its nearest distance from the sun, called its perihelion, in our summer, and at its aphelion, or farthest distance from the sun, in winter. Its aphelion distance is 96,984,127 miles, and its perihelion, 93,562,127 miles; its mean, or average distance, being 95,273,127 miles.

Let us suppose the earth at the winter solstice about the 21st of December. Here the north pole being turned always from the sun, is in perpetual darkness; it is winter to England, and all northern latitudes, while the south pole is receiving, without intermission, the light of the sun for six months.

Conceive the earth to have advanced in its orbit till March 20th, the vernal equinox; there is now equal day and night to every part of the globe; the sun is vertical to all places under the equator; at the south pole he is dipping below the horizon, and rising to the north, after his long absence of six months. The earth continuing its course, at the amazing rate of 70,000 miles per hour, arrives, about June 21, at the summer solstice. The north pole,* which

* When the poles are mentioned, it is to be understood as including all places comprised within the polar circles.

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was in darkness at the winter solstice, is now, in consequence of the earth's axis having maintained its parallelism, turned towards the sun, and the south pole is deprived of his cheering rays. In short, every circumstance is exactly reversed, as it respects the seasons, to what they were on the 21st of December.

Lastly, the earth arrives at the autumnal equinox Sept. 23. The sun is rising at the south pole, and setting to the northern regions; in every other respect the earth is in a similar situation to what it was at the vernal equinox.

The earth, unwearied in its course, pursues the same track, and once more arrives at the winter solstice, and continues the succession of summer and winter, seed-time and harvest, which we are assured shall not cease.

It is to the phenomena of the seasons, combined with the alternation of day and night, that we are indebted for those grateful vicissitudes, on which so much both of our business and happiness depends. Man is here in a state of probation, or preparation for a nobler existence; having duties which he is tempted to omit, or at least to procrastinate. To remind him of the lapse of time, of that the period of his residence here being but of short duration, all the appearances of nature uniformly conspire: the day and night succeed each other; the rotation of the seasons diversifies the year; the sun attains the meridian, declines, and sets; and the moon each night changes her form; all tending to awaken the drowsiness of hesitation in man to a resolution to work while it is called to-day.

"The day may be considered as an image of the year, and a year as the representation of life. The morning answers to the spring, and the spring to childhood and youth. The noon corresponds to the summer, and the summer to the strength of manhood. The evening is an emblem of autumn, and autumn of declining life. The night, with its silence and darkness, shows the winter, in which all the powers of vegetation are benumbed; and the winter points out the time when life shall cease, with its hopes and pleasures.

"He that is carried forward, however swiftly, by a motion equable and easy, perceives not the change of place, but by the variation of objects. If the wheel of life, which rolls thus silently along, passed on through undistinguishable uniformity, we should never mark its approaches to the end of the course. If one hour were like another; if the passages of the sun did not show its wasting; if the change of seasons did not impress upon us the flight of the year; quantities of duration equal to days and years would glide away unobserved. If the parts of time were not variously coloured, we should never discern their departure or succession; but should live thoughtless of the past, and careless of the future; without will, and perhaps without power, to compare the time which is already lost with that which may probably remain.

"But the course of time is so visibly marked, that it is even observed by nations who have raised their minds but very little above animal instinct. That these admonitions of nature may have their due effect, let him that desires to see others happy, make haste to give while his gift can be enjoyed; and remember, that every moment of delay takes away something from the value of his benefaction.

"And let him who proposes his own happiness reflect, that, while he forms his purpose, the day rolls on, and the night cometh when no man can work."

FREE GRACE INDEED.

The gospel of Christ invites all that are athirst to come to him, and he will give them of the fountain of the water of life freely; and assures the trembling sinner, that him that cometh to the Saviour, he will in nowise cast out. As, therefore, all the blessings of salvation are freely given, for Christ's sake, to the poor supplicant, however unworthy, nothing but pride, unbelief, contempt of heavenly things, aversion to God and religion, or idolatrous love of the world, can exclude any sinner from this great salvation. Every part of the plan is free from ambiguity; our wants are distinctly stated; promises are given exactly answering to them; means are appointed in which we may apply for the performance of these promises; and God pledges the honour of his faithfulness, that every one who seeks the blessing in his appointed way, shall certainly obtain it.—*Scott.*

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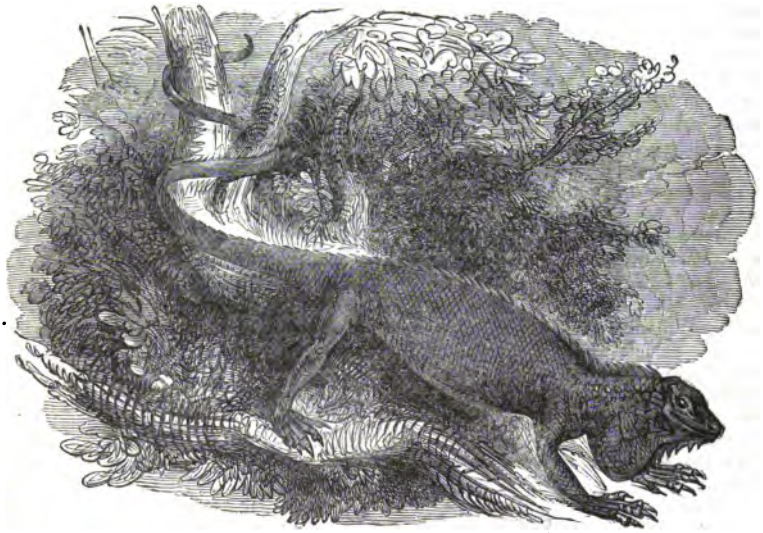

The Iguana.

ON THE IGUANA.

WITH SOME OBSERVATIONS ON THE LIZARDS GENERALLY.

THE Saurian, or Lizard tribe of reptiles, containing a vast multitude of curious, interesting, and often beautiful creatures, whose forms and colours are alike calculated to excite attention, has unfortunately been the *butt* of popular prejudices, which in these days of spreading knowledge, are, we hope, yielding to the voice of reason teaching us, in accordance with the express words of the Almighty Creator, that all are made "in wisdom." Let any person, even the most fastidious, look at that brilliant little animal the green lizard, (*Lacerta viridis*,) so common in the south of France and Italy, and occurring also in the island of Guernsey, and say what is there in it to excite horror or disgust. Its lithe and agile form, its sparkling eyes, its rich and effective colouring, and its nimble movements, claim our admiration. The chamelion, on the contrary, slow in its actions, and far less elegant in appearance than the green lizard, has long excited general attention from the rapid changing of the colours of its skin, a point in which it is not alone among the lizard tribe. With feet and claws admirably adapted for clinging to the twigs and slender branches of trees; with a prehensile tail; with eyes gifted with the power of movements independently of each other; and with a long fleshy tongue, capable of being launched out to a great distance, and that with arrowlike rapidity and precision; the chamelion is in itself a study for the naturalist. The geckos, again, with expanded toes and retractile claws, like those of the cat, and endowed with the power of traversing walls and ceilings, as does the common house-fly; and the flying lizards with their parachutes; interest us by their structural peculiarities.

It is true that among the saurians we have the fierce and the terrific, as well as the gentle and elegant; the gavial, the crocodile, and the alligator rank among them: but are these tyrants of the river and lagoon destitute of interest? Is there no proof of the wisdom and power of God in their habits, manners, and organization, to delight the reflective mind of him who loves to trace God in all his ways? Let our reader, before he answers No, turn to an account of the "gular valve of the crocodile," in the Visitor for 1836, p. 63, and read it attentively. But why demand for the saurians that attention which the lover of nature does not refuse; or advocate the interest attached to the study of a tribe which the slightest consideration must allow?

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The class *Reptilia** contains the following orders or great groups:—1. The Tortoises, or *Chelonia;*† 2. The Lizards, or *Sauria;*‡ 3. The Serpents, or *Ophidia* § The amphibia,‖ formerly associated with the reptilia, constitute a distinct class; their body is covered with a soft naked skin; they all commence life as aquatic animals, having gills for the respiration of water, which are subsequently lost, true lungs for aërial respiration becoming then developed; in some species, however, as in the proteus, (see Weekly Visitor for 1834, p. 25,) the gills, or *branchiæ*, are persistent through life, and accompanied with lungs, and heart with one auricle, and one ventricle. The frog, the toad, the water-newt, (or *Triton*, Laurenti,) the axolotl of Mexico, and the proteus of the caverns of Carniola, are examples of this order.

On the other hand, the reptilia have the body always covered with scales or hard plates, or granulated points imbedded in the skin, heart with two auricles, and one ventricle. The lungs are extensive, consisting of a tissue of large cellules; the young undergo no transformations from water-breathing to air-breathing animals. The majority of species are oviparous; some serpents are ovo-viviparous. The passage from the chelonia to the sauria is very apparent; the testudo serpentina, for example, approximating closely to the crocodiles, and forming a distinct union between the two; nor is the passage from the sauria to the ophidia less marked; the genera scincus, seps, and bipes, running very palpably into the blind worms (anguis,) and the amphisbæna.

It is with the sauria that we are immediately concerned at present. In our northern latitudes, unless by becoming acquainted with them through the medium of works or museums, we can form no idea of the multitude and variety of saurians which tenant the hotter regions of the globe. A limited number of species, and these all small, inhabit our island, and the parallel and more northern countries of the continent; but as we pass southwards, their number increases, and some among them occur of unexpected dimensions; as for example, that beautiful species, the lacerta ocellata, that largest of European lizards, measuring fourteen or fifteen inches in length, independently of the tail. It is found in the south of France, in Spain, and in Italy. Its ground colour is rich green, elegantly marked with eyes of violet.

Passing still farther south, and arriving at the borders of the intertropical latitudes, we enter their crowded empire, which extends throughout the equatorial regions. Here, beneath a glowing sun, where nature assumes her most gigantic forms—where mighty forests clothe the soil, and marshes nourish a luxuriant vegetation—revelling in their congenial abode, the saurian tribes teem on every side, presenting an almost endless diversity of forms and hues. Diversified, too, in their habits as in their appearance, they astonish or interest, please or repel. Some tenant the trees, chasing their insect prey with great agility; some are exclusively terrestrial, and conceal themselves in holes and fissures; some burrow in the sand, and that with such extraordinary rapidity, that they appear to have found rather than made a hiding place. Some, and these are the largest and most formidable of the race, are aquatic; for during time immemorial has the crocodile been celebrated for his prowess. The heat of the sun seems peculiarly grateful to all the sauria; our own little lacerta agilis may be seen on fine warm days in summer basking in the genial beams of the "orb of day," but ever on the watch against the approach of intruders. The crocodile will lie on the bank, or on the surface of the water, enjoying the warmth, and sunk in slumber. Walls, and banks, and trees are often seen covered by lizards of mingled hues, attracted from their lurking places by the meridian sun. "I am positive," says Mr. Bruce, "and I can say without exaggeration, that the number I saw one day in the great court of the temple of the sun at Balbec amounted to many thousands: the ground, the walls, and the stones of the ruined buildings were covered by them, and the various colours of which they consisted made a very extraordinary appearance, glittering under the sun, in which they lay sleeping and basking." Like the snake tribe, the sauria moult their cuticle during the spring or summer, after which they appear in brighter colours; during the winter they hybernate, at least in our northern clime, and also in the warmer regions of southern Europe, retiring to

* *Repto*, to creep.
† Χελωνη, a Tortoise.
‡ Σαυρος, a Lizard.
§ Οφις, a Serpent.
‖ Αμφι-βιος, double life.

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holes in the ground, and the chinks of old walls, etc., in which they pass the months of cold, and (as to them they would be) of famine. In the intertropical regions their retirement is less continuous, and cannot be termed hybernation; the rainy seasons may drive them to their retreats for a time, but it does not appear that they sink into a state of torpor; and in dry climates, as Arabia, Egypt, etc., where they abound in incredible multitudes, they do not, as far as we can learn, disappear for any season of the year, but may be always seen.

None of the sauria are poisonous; none have venom-fangs, though the ancients regarded many as deadly in the extreme. Of these the basilisk* was especially celebrated. Our classical readers will remember Lucan's description of this lizard, the fancied pest of the deserts of Africa.

"But fiercely hissing through the poisoned air,
The basilisk exerts his deathful glare;
At distance bids each vulgar pest remain,
And reigns sole monarch of his desert plain."

The light of knowledge has dispelled these errors, the fruits of ignorance and credulity, and with them another error respecting some of these reptiles; namely, their medicinal properties. One species of lizard, the adda of the Arabians, (Scincus officinalis,) once obtained a place in the Materia Medica; its flesh was regarded as a restorative, and of great use in leprosy, and other diseases. It was one of the ingredients in that compound known as *theriaca*, or *Confectis Damocratis*, the wild exuberance, as Dr. Lewis expresses it, of medical superstition in former ages. Till very lately, the belief in the medicinal virtues of the scincus continued in Arabia: it seems, however, to have passed away; for Bruce observing that the el adda is one of the few lizards which the Arabs have in all times believed to be free from poisonous qualities, and yet to have all the medical virtues so abundantly lavished upon the more noxious species, adds, that the character of these reptiles seems to be greatly on the decline in their native regions, and though the books prescribing them are in every body's hands, yet the medicine is not now made use of in the places where the books were written.

If, however, the lizard race are destitute of medicinal properties, many of them continue to hold a high rank as articles of luxury for the table. Of these the iguanas, or guanas, deserve our particular notice. The iguanas (gen. *Iguana*, Cuv.) are large lizards peculiar to the warmer portions of America and the West Indian Islands: they are distinguished by a serrated dorsal crest along the spine, consisting of compressed, elevated, and pointed scales, and by the large pendulous dewlap of skin under the throat, which is capable of being inflated. The scales of the body are small and imbricated; those on the head are in the form of plates, and constitute a sort of tesselated pavement; the tail is of great length, and more or less compressed laterally. A range of tuberculous pores runs down the inside of each thigh; the jaws are encircled by a row of compressed triangular teeth, with notched cutting edges, and two small rows are also on the posterior edge of the palate. The iguanas are arboreal in their habits, and feed both on insects and vegetables; they occasionally visit the water, in which they swim with ease and rapidity, putting their limbs close to their bodies, and lashing the tail from side to side in a serpentine manner, and with great vigour. Of a fierce aspect, they are nevertheless easily tamed; but during the pairing season the male is savage, watches constantly over his mate, and becomes furious if any one approaches her, biting with great severity. The incessant destruction of some of the species, for the sake of their flesh, has rendered them very scarce, if not altogether extinct in localities where they were once abundant; nor are their eggs, also in high estimation, exempt from the rapacity of man. The common mode of catching these animals, is by throwing a noose over their heads, and pulling them down from the branch on which they are resting: this is easily done, for when discovered, they seldom attempt to escape, but gaze at their assailants, inflating their throat prodigiously, and assuming as formidable an air as possible.

The common iguana, or guana, (*Iguana tuberculata*, or *Iguana delicatissima*,) is found very generally throughout intertropical America, and often attains to the length of five feet. Its flesh is white and delicate, but is found to disagree with some constitutions. Catesby informs us, that many of the Bahama

* With this fabulous animal of antiquity must not be confounded an American species allied to the iguanas, and constituting the genus basiliscus, Daud., and which we shall presently notice.

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islands abound with these animals, "where they nestle in hollow rocks and trees: their eggs have not a hard shell like those of alligators, but a skin only, like those of a turtle, and are esteemed a good food. They lay a great number of eggs at a time in the earth, which are hatched by the sun's heat. These guanas are a great part of the subsistence of the inhabitants of the Bahama islands, for which purpose they visit many of the remote kayes and islands in their sloops to catch them, which they do by dogs trained up for that purpose, which are so dexterous as not often to kill them. If they do so, however, the guanas then serve only for present use; if otherwise, they sew up their mouths to prevent their biting, and put them into the hold of their sloop until they have obtained a sufficient number, which they either carry alive for sale to Carolina, or salt and barrel up for the use of their families at home. These guanas feed wholly on vegetables and fruit, particularly on a kind of fungus growing at the roots of trees, and on the fruits of the different kinds of annonas. Their flesh is easy of digestion, delicate and well-tasted; they are sometimes roasted, but the more common way is to boil them, taking out the fat, which is melted and clarified, and put into a dish, into which they dip the flesh of the guana as they eat it."..... "Though not amphibious, they are said to keep under water above an hour. They cannot run fast, their holes being a greater security to them than their heels. They are so impatient of cold, that they rarely appear out of their holes but when the sun shines."

Brown, in his Natural History of Jamaica, (an island where the guana is almost exterminated,) says, that like most of the tribe, this animal "lives a very considerable time without food, and changes its colour with the weather, or the native moisture of its place of residence." "I have kept," he adds, "a grown guana about the house for more than two months; it was very fierce and ill-natured at the beginning, but after some days it grew more tame, and would at length pass the greatest part of the day upon the bed or couch, but always went out at night. The flesh of this creature is liked by many people, and frequently served up in fricassees at their tables, in which state it is often preferred to the best fowls. The guana may be easily tamed while young, and is both an innocent and beautiful creature in that state."

The iguanas we have seen in captivity in England, appeared to be slow and stupid, with no small degree of fierceness in their temper; indeed, on one occasion, a large iguana, which permitted its owner to handle it without resentment, made several snaps at the writer, when he attempted to take the same liberty, and put on a menacing aspect indicative of anger. The general colour of this species is green, more or less tinged with olive, or yellowish, marbled with a purer and brighter tint; the tail is ringed with dusky black.

A third species, closely allied to the common iguana, is found in St. Domingo, and was first described by Lacepede. From a conical bony point between the eyes, and two raised scales over the nostrils, it is termed *Iguana coronata*.

The genus *Basiliscus*, Daud., differs from the iguana in wanting femoral pores; the body is covered with small scales, and along the back and tail there runs a continuous and elevated crest, sustained by the elongated spinous processes of the vertebral column. The basilisk, (*Lacerta Basiliscus* of Linn.) which, as we have said, must not be confounded with the fabulous basilisk of the African deserts, so renowned in the imaginative works of the ancients, is a native of Guiana, and though of large size and formidable appearance, is perfectly harmless. Its head is surmounted by a membranous elevation, like a raised hood or cap, and sustained by cartilage; this renders its aspect very peculiar. Grain and vegetable matters form its chief diet; in habits, like the iguana, it is arboreal, but often takes to the water, swimming with great ease and vigour. Its colour is dusky blue, with two white stripes, one arising behind each eye, and one from each jaw, which extend over the shoulders, and are there blended with the tint of the body. M.

HAPPINESS.

If thou desire happiness, desire not to be rich: he is rich, not who possesses much, but he that covets no more; and he is poor, not that enjoys little, but he that wants too much: the contented mind wants nothing that it hath not, the covetous mind wants, not only what it hath not, but likewise what it hath.—*Quarles.*

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OCTOBER FLOWERS AND PLANTS.

Plants in Flower.

WILD.

Soapwort, *Saponaria officinalis*
Hedge bindweed, *Convolvulus Sepium*
Marsh ragwort, *Senecio palustris*
Alpine willow herb, *Epilobium alpinum*
Forget-me-not, *Myosotis palustris*
Meadow saffron, *Colchicum autumnale*
Golden rod, *Solidago virg-aurea*
Burnet rose, *Rosa pimpinellifolia*
Prickly rose, *Rosa spinosissima*
Stone Bramble, *Rubus saxatilis*
Hedge lady's bedstraw, *Gallium Mollugo*
Wall snapdragon, *Antirrhinum Cymbalaria*
Pellitory of the wall, *Parietaria officinalis*
Water-cress, *Nasturtium officinale*
Marsh-cress, *Nasturtium palustre*
Wood-cress, *Nasturtium sylvestre*
Gilly flower, *Matthiola incana*
Sea rocket, *Cakile maritima*
Double seed, *Diplotaxis tenuifolia*
Corn marygold, *Calendula arvensis.*

CULTIVATED.

Coronal gold-flower, *Chrysanthemum coronarium*
Saffron crocus, *Crocus sativus*
Parrot Corn-flag, *Gladiolus pittacinus*
Yellow amaryllis, *Sternbergia lutea*
Scarlet sage, *Salvia Splendens*
Spotted honey-wort, *Cerinthe maculata*
Belladonna lily, *Amaryllis belladonna*
Guernsey lily, *Nerine sarniensis*
Sweet maudlin, *Achillea ageratum*
Late feverfew, *Pyrethrum seratinum*
Ten-weeks stock, *Matthiola annua*
Sun flower, *Helianthus annuus*
Jerusalem artichoke, *Helianthus tuberosus*
Beautiful star-flower, *Aster pulcherrimus*
Michaelmas daisy, *Aster multiflorus*
Three-coloured Indian cress, *Tropœolum tricolor*
Globe Buddle's flower, *Buddlea globosa*
Garden dahlia, *Dahlia hybrida*
Garden hearts-ease, *Viola hybrida*
Auricula, *Primula auricula.*

THOUGH the interest of botanical excursions in the fields may, to some, seem to diminish with the disappearance of the summer flowers, it is never so with the botanist, who delights to trace the ever-varying phenomena of the creation. The withering flowers, the changing leaves, and the bare stubble-fields, all yield abundant food for the contemplative mind to dwell upon with improvement—all leading from countless points of view, to the great central truth of the superintendence of an omniscient and omnipresent God.

In the simple and expressive language of our rural poet, Clare,

"The sun proclaims Him through the day,
The moon when day-light fades away;
The very darkness smiles to wear
The stars that show that God is there;
On moonlight seas soft gleams the sky,
And, God is with us, waves reply.
Winds breathe—from God's abode they come;
Storms louder own God is their home:
And thunders, with yet louder call,
Shout God is mightiest over all!
Till earth—right loth the proof to miss,
Echoes triumphantly—HE IS!
And vale and mountain make reply,
God reigns on earth, in air, and sky."

THE DEITY.

The various tints of change in the colour of the leaves, from the bright green of the opening buds in spring, to "the sear and yellow leaf" of autumn, arise from chemical and physical causes, which we shall endeavour to render plain to the attentive reader. Plants have no organs similar to the lungs of man and quadrupeds, the gills of fish, nor even, perhaps, to the air-pipes (*spiracula*) of insects; though plants cannot live without air, any more than animals; and when deprived of air, they die. As the air, therefore, cannot be dispensed with in plants, it must act on them in some peculiar manner; and, accordingly, it has been proved by experiment, that the leaves of plants perform some analogous function to the animal lungs. The functions of the lungs of animals consist in the decomposition of the air taken into the lungs in breathing, by its giving up part of its oxygen, which combines with the blood, and in turn receives from the blood a portion of watery vapour and carbonic acid gas, which is carried off into the air by the

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return of the breath. This process of decomposition, it is worthy of notice, takes place in the dark, as no light can penetrate to the animal lungs. By conceiving the reverse of this process, some idea may be formed of what takes place in plants.

The sap, which mounts from the roots into the leaves, and the young green shoots, is composed of water and carbonic acid gas, with a few other ingredients in small proportions, not very dissimilar to the materials of the returning breath. This sap is spread out on the leaves and other green parts of plants, and becomes partly decomposed *in the light*, a portion of the oxygen in the acid being set free from the carbon; this remaining in the leaf while the oxygen passes off into the air along with a large portion of water, in the form of vapour, nearly, if not altogether invisible. This exhalation of water takes place through the pores of the leaves, and other green parts, though the decomposition of the air goes on where there are no pores present. The quantity of water which is exhaled in this manner from an ordinary-sized cabbage, has been proved by experiment to be seventeen times greater than that given off from the body of a man by insensible perspiration.

As the decomposition of air in the lungs takes place in the dark, and probably would not be effected in the light, the decomposition of the sap in plants, on the contrary, takes place in the light, and cannot be effected in the dark. A trifling evaporation may be caused by heat, but this is nothing in proportion to that caused by light; and hence it is, that plants exposed to much light, such as those growing on mountains, are greatly harder and tougher than when grown in more shady places.

It is on these principles, that the green colour of leaves, and the varied colours of flowers, are philosophically accounted for, though the subject is but imperfectly understood; all the wonders of the creation far surpassing the imperfect investigations of fallen man. The real colour of the carbon, left in the leaves, when the oxygen and the water are exhaled, is said to be dark-blue, rather than black; and as the tissue of cells and vessels constituting the fabric of plants, is of a yellow colour, and transparent, or at least translucent, the dark-blue carbon, when seen through this yellow tissue, appears to be green. Accordingly, in the spring, the newly-expanded leaves, before they have had time to prepare much carbon, are of a yellowish tint, very strikingly beautiful in the young leaves of the lime tree and of the acacia.

Again, when plants are kept from the light, so that little or no carbon can be prepared by their leaves, they become white, and also crisp and succulent from the same cause; as is seen in blanched celery and endive, and in the shoots of potatoes in a dark cellar. It is on account of the bright, vertical sun-light, that the trees, in hot climates, are so much darker in foliage than here; even the English oaks planted at St. Helena have their leaves nearly as dark as cypress, and they become evergreen.

When the longer nights and decreasing power of the sun's warmth at this season render the weather colder, the pores of the leaves become too feeble to open much during the day; and as they take in oxygen in the night, instead of this escaping as in summer during the day, it remains confined, and, uniting with the materials in the texture of the leaves, forms various acids, whose known action is to change blues into reds. Accordingly, when the dark blue carbon becomes tinged in this manner, it produces various shades of orange, and other combinations of red and yellow.

The American plants have the peculiarity of their leaves, in numerous instances, changing into a bright scarlet, with very little tinge of orange, as may be observed in the sumach, (*Rhus radicans*, etc.) and the Virginian creeper (*Ampelopsis hederacea*,) the last, a very common house-wall plant about London, and deservedly a favourite, as it will thrive in the most confined atmosphere, and will climb to the height of the highest ordinary houses, covering the walls with its thick foliage, and preserving them from all damp, contrary to the popular erroneous opinion, that climbing plants cause damp in walls. The leaves, at this season, when they change to their fine scarlet, are very ornamental, though they must appear much inferior on our walls to what they do in their native forests, where they festoon the tall trees almost to their very summits.

If we go from the city to the country,

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and from the fading leaves of the Virginia creeper, trained in a London area, away to the peasant's cottage, we may still see the honeysuckle sending out occasional blossoms, and the monthly roses resuming all their beauty as in spring and summer. The honeysuckle is very irregular in its flowering, and, in some instances, will stand for years without showing any blossoms, while, in other cases, it will continue blowing the greater part of the summer and autumn. The berries have a nauseous, unpleasant taste, but this is relished by some of the fruit-eating birds which feed on them. The honeysuckle likewise furnishes food for the caterpillar of a very pretty small moth, called, by collectors, the twenty-plume, (*Alucita pentadactyla*,) the wings of which, instead of being in one piece, are divided into a number of feathers, similar to those of a bird. This moth is not uncommon, and may be often seen reposing with its pretty wings spread out on the glass of our windows.

Though there are now few flowers to be met with in the open fields, there are still a considerable number in hedges, where the bushes shelter them, and more particularly in marshes and watery places, where the moisture keeps them fresh and growing. Amongst the hedge flowers, we may notice the large white-flowered lady's bedstraw, (*Gallium Mollugo*,) which grows luxuriantly in chalky districts, and rises high in hedges and copses, bearing several hundred flowers on a truss. The roots do not easily bear transplanting, and those botanists who are curious enough to grow it, must collect and sow the seeds, and the plants will flower in the second year.

Plants may also be still found in flower of the yellow lady's bedstraw, (*Gallium verum*,) which has eight leaves in a whirl at each joint, narrow, and furrowed. The flowers are yellow, and have a rather strong odour, not disagreeable. The juice of this plant will curdle milk, and hence it has been called cheese-rennet.

The various sorts of cress to be met with in ditches, streams, and moist places, are worthy of the attention of the botanist, from their useful qualities. The water-cress, (*Nasturtium officinale*,) though so common and well known, is not unfrequently confounded with a plant with similar leaves, which grows in the same places—the creeping water-parsnip,)*Sium nodiflorum*,) and as this is by no means wholesome, though not perhaps decidedly poisonous, it may be well to point out the marks by which the two can be distinguished. The leaves of the water-parsnip are of a lighter green than those of water-cress, and never purple nor brown, like the latter; while the leafits, or divisions of the leaf, are longer and narrow, saw-toothed on the edges, and pointed at the end, in the water-parsnip. The leaves of water-cresses, on the other hand, have the leafits roundish, and particularly the odd leafit at the end of the main leaf, which is large and blunt. None of them are regularly saw-toothed, though they have a few indentations along their edges. When the water-parsnip is in flower, the spokes of the umbel have both an *involucrum* and an *involucellum*, the flowers all fertile, the petals heart-shaped, and the seeds egg-oblong, and streaked. The most certain proof for persons not acquainted with botanical distinctions, is the taste; this can never be mistaken.

The best water-cresses are those which grow within reach of the tides, at least of spring tides, the salt of the sea-water, apparently, acting as a beneficial stimulus to improve their growth and flavour. Next to those, may be preferred such as grow in very shallow streams of clear spring-water, where the bottom consists of gravel, or small boulder stones. Mud, or clay, does not agree with them.

The hedge bind-weed (*Convolvulus Sepium*) still continues to put forth, occasionally, its large and elegant white blossoms, which are pleasing to the eye of the botanist, but are looked upon with a very different feeling by the gardener and the farmer, to whom the roots form the most troublesome of all weeds. These roots, which are white, and about the thickness of a tobacco-pipe, run into the soil in all directions, and are so tenacious of life, that if the least bit be broken off, it will sprout, send up a stem, and form the origin of a large plant. The leaves are arrow-shaped, and truncate behind, and the flowers come out single, on square-foot stalks. In spots where it can be kept from spreading as a weed, this may be cultivated as a showy flower. It will thrive even in places where it can receive no sun, such as in courts and areas.

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One of our prettiest native plants is the lesser centaury, (*Erythræa Centaurium*,) though it is by no means showy or conspicuous; and the less so, that its fine pink flowers only open when the weather is very bright and sunny. It is stated in books to be annual, but we have more commonly found it to be biennial, the seed sowing itself when ripe, coming up before winter, and flowering the following summer. It is one of the best bitter herbs which grow native in Britain; but it is by no means abundant, growing chiefly in a few detached plants. The writer has found it on the hills near Port Patrick, in Wigtonshire; at Birchwood-corner, and Oak-of-Honour wood, in Kent; and abundantly in Normandy.

In gardens the various species of star-flowers, (*Aster*,) or, as they are usually called, Michaelmas daisies, are most conspicuous, with the exception of the dahlias. Attention has lately been paid to increase the varieties of these, and already we have about a dozen for this month alone, of various heights, from two feet high (*Aster amellus*) to seven feet high, (*Aster roseus*,) and from fine white (*Aster elegans*) to bright pink, pale blue, and purple (*Aster Novæ Angliæ*.)

Mr. Rivère has been successful in cross-breeding those flowers, so cheerful at the commencement of our gloomy season, by tying together the flowers of the different sorts he is desirous of crossing; such as the rose-coloured and the white, the rose and the blue, etc. He describes his seedlings for one season, one thousand in number, as having all degrees of colours, from dark-blue to the most beautiful azure; from bright rose-colour to the most delicate blush; from pure white to French, or greyish white, in countless varieties of shades, and in all sizes; some being the size of a sixpence, some an inch, or an inch and a half in diameter, and some semi-double.

The Jerusalem artichoke (*Helianthus tuberosus*) is a species of sun-flower, with tuberous roots, not unlike those of the potato; it forms a tolerable vegetable for the table, somewhat intermediate between parsnips and turnips. The flowers rarely blow in this country; they are yellow, and about the size of those of the common dandelion, (*Leontodon Taraxacum*.) This plant is a native of Brazil, and has no connexion whatever with Jerusalem, the name having originated in a corruption of the Italian name for sun-flower (*Girasol*) into Jerusalem, in consequence of a similarity in the sound.

Various species of primroses now show second flowers; such as the polyanthus and the auricula, which had previously flowered in spring. If the weather be open, they will, indeed, occasionally blow during a great part of the winter, though the flowers are by no means so fine as those which are produced in spring. J. R.

THE LOVE OF GOD DISPLAYED IN NATURE.

It may be the boast of the godless man that he can look unaffected and unmoved upon what is transacting around him, and the proud man may disdainfully disregard all that is unadorned by the trappings of art; but it is the Christian's joy to behold in the bright sunshine of summer, in the gay flowering of spring, and in the rich harvests of autumn, a cheering evidence of his Father's love; to read the same truth delineated in brightest characters upon the blooming face of childhood, and to hear it lisped forth in the joyful, though scarcely articulated accents of infancy. He who is regardless and thoughtless of passing scenes, deprives himself of one of the highest gratifications his nature is susceptible of; and denies himself an enjoyment amongst the most delightful he can share. Although it be true that nature cannot teach us much of the character and attributes of Deity till the soil of our hearts and understandings has been prepared by Divine influence; yet it is also true, that as soon as this preparation has been made, the renewed man beholds the hand of his God in every thing. Also he sees the love of God both in the blessings bestowed, and in the corrections inflicted; and feels that, whether in mercy he be giving, or in love he be taking away, he is in both cases acting as a wise and affectionate Father.

Some individuals seem to think that they cannot derive pleasure from the observation of nature, without first poring over some long dry work on Natural History, and therefore plead the want of

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time as a reasonable excuse for refusing themselves the acknowledged gratification. This excuse, however valid it might be, were their ideas just, is rendered utterly untenable by the fact that such deep and lengthened study is by no means necessary, and often injurious. Walk out then, on some lovely morning, see the little groups of smiling children gladly and joyfully taking their morning walk; hearken to the note of the lark, as it wafts along in the delightful sunshine; cast a glance over the fields, whether decked with grass or corn, ready to reward the husbandman with a plenteous harvest; and if you can dwell upon such sights and sounds without feeling your heart ready to burst with gratitude towards the Author of these blessings, you must be unfeeling and ungrateful indeed; and your apathy is by no means enviable. It is not the Christian's part to grieve; he is a ransomed captive, therefore let him rejoice; he is a pardoned sinner, therefore let him shout for joy; he knows that the God, who of his infinite love and goodness sent his well-beloved Son to seek and to save our wandering race, must be love. Hence, as he looks up towards the starry firmament, when the last glimmerings of twilight have faded into darkness, and ponders upon the wondrous regions that stretch in boundless infinity before him, he thinks, and oh, he thinks with joy, that all these worlds are governed by his Lord and Saviour; and his enraptured feelings carry him away from all the vanities and follies of his passing life; and bind him unreservedly to so merciful a Friend.

But yet it is as well to observe, that though nature need not be actually studied to be enjoyed, yet the degree of pleasure derived will necessarily be proportioned to the amount of pains taken to obtain it. The deeper we penetrate into the precious Volume, the greater joy shall we obtain from it, and the more fully shall we be convinced, that the God who walks through the paths of nature, and who guides and governs all things there, is a merciful Being, and one who seeks only the happiness of his creatures. Perhaps this truth is not more fully established anywhere out of the Bible, than by the provisions He has made for the ensuring of enjoyment to every thing to which he hath given life. It was not necessary that the birds should derive so much evident gratification from the rearing of their young ones as they clearly do; nor that they should be able to hail the first beamings of the morning sun with a joyful and melodious song. It was not necessary that the insect should sport so gaily and so happily in the sunbeams, and derive so great a measure of enjoyment from its short-lived existence. It was not necessary that our own senses should be so adapted to the lovely scenes that smiling nature presents to our notice, as to derive from them so perceptible and endearing a joy, but the all merciful wisdom of our Divine Creator, in addition to the mere boon of existence, has of his free grace granted to us an inexpressible fountain of enjoyment. He who has the love of Christ dwelling within his bosom, shall be privileged to share, in a future and a better age, the inexpressible pleasure of beholding, with unclouded eyes, the workings of Almighty love.

While cherishing and noting down such reflections as these, my thoughts naturally perhaps, but mournfully, direct themselves towards the sad condition of the infidel; and I think that I would not for all the world, and all the glory of it, deny or doubt the existence and love of my God. The Christian must feel that it is one of his greatest privileges, and one of his chief blessings, to be allowed to trace the hand of God in his dealings with men. Though sometimes thick dark clouds of affliction may obscure his vision, and fill his trembling bosom with awe and amazement, yet, like the storms that oftentimes interrupt the loveliness of summer, they soon pass by, and the sun again appears, and seems to shine more brightly than before. Indeed, the darkest clouds often "drop in blessings on our heads." Also Christianity comes to the soul with the soothing assurance, that the day is fast approaching, when there shall be no more clouds, and when the Sun of Righteousness shall have dispelled the thickest and the darkest cloud that ever overshadowed any of the works of Jehovah, even the cloud of sin. L. H.

GOD'S THRONE.

God has two thrones: one in the highest heavens; the other in the lowest hearts. —*Wright.*

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THE PERAMBULATOR.

EXCURSION TO FRANCE.

PART IV.

Churches—St. Roch—Notre Dame—Processions—Parisian Sabbath—Tuileries—Palais Royal—The Louvre—The Pont Neuf—The Sagacious Dog—Public Buildings—The Flower Garden—Pere la Chaise — The Catacombs — La Morgue — The Bastile — The Great Elephant— The Place de Louis XV. — The Seine — Timber Rafts—The Groom and his Horses.

I have neither ability nor inclination to describe Paris; a few remarks on the little that I saw of it, with the impression that little left on my mind, is all that I have to offer.

There are three or four Protestant churches in Paris, if not more; but I only entered that of the Oratoire, Rue St. Honore, where Divine service is conducted in English.

Most of the religious edifices of the city are profusely adorned with paintings. It appeared to me, that where London had one good painting, Paris had ten; this may, however, be a very erroneous estimate. I cannot say what effect a profusion of paintings in a place of Divine worship has on the French people, but they sadly drew away my thoughts. The simplicity of the gospel does not harmonize with such displays. If when we enter God's house, we really "assemble and meet together to render thanks for the great benefits received at his hands, to hear his most holy word, and to ask those things that are requisite and necessary, as well for the body as the soul;" if, in a word, we come as sinners in our Saviour's name, to offer our praises and our prayers to the King of kings, and Lord of lords, what time have we to throw away on the fairest creations of the artist's hand?

The Church of St. Roch is rich to an extreme with ornaments and paintings. A group of persons, apparently strangers, were looking on the inscription to the memory of Corneille, while others gazed on the pillars and steps shattered by cannon-balls on the memorable 13th of Vendémaire.

The strange mixture of military pomp and devotional processions in Notre Dame, the Cathedral of our Lady, much surprised me. The white-robed young women, closely hooded, gliding along the aisles, seemed not out of character; but the clanking of the iron heels of the soldiers, and the rattle of the butt-ends of their muskets on the broad flag-stones, were sadly unseasonable.

As I stood observing the priests at the altar, a sharp pull at my coat-skirts made me turn round. An old woman kneeling on the floor, shocked, I suppose, at my apparent want of devotion, was tugging away to make me prostrate myself like the rest. An English lady near me seemed much exhausted by being so long on her feet. Observing a score or two of chairs unoccupied, I innocently handed her one, but the old lady before mentioned came up and snatched away the chair. This was not done in a spirit suited to devotion, neither was it a favourable specimen of French civility; but a gentleman wearing the riband of the legion of honour, observing the circumstance, stepped up, and politely handed me another chair. I was not then aware that it was usual to pay for the use of these chairs. I was absolutely spellbound by Notre Dame, both outside and in, it was so different from any thing I had seen before. Its square, massive, two-towered front impressed itself deeply on my remembrance.

There was that in the manner in which Parisians spent their sabbath that appeared truly awful. Since the time of which I am now speaking, London has, to a great extent, adopted the sabbath-day customs of Paris; but it was not so then. I was not prepared to witness such an open, unblushing disregard of the solemnities of the day.

In the afternoon the time seemed given up to the most unbridled pleasure. Every public place was thronged with company. Theatres were open, windows and court-yards were crowded with both sexes, some reading newspapers, others drinking and smoking; conjurers, puppet-shows, ballad-singers, tumblers, dancing-dogs, merry-andrews, and fortune-tellers, seemed without end. In the English metropolis revelry is the exception, and sobriety the rule; but in Paris this seemed reversed: the common decencies of the day were altogether set at nought. London has numerous sabbath-breakers within it, but Paris is a sabbath-breaking city.

On the Monday, after attending at the office of Police, to present my passport, I applied for notes of admission to the public places of the city. It is true that in Paris you are admitted free to many such sights as in London you could not see without payment; yet an Englishman derives but little advantage from

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this arrangement, for the polite attentions and bowing and shrugging of the attendants are pretty sure to make the matter equally expensive.

The Tuileries, with its grand pavilions, beautiful garden, statues, fountains, basins of water, and orange trees; the Palais Royal, with its amazing bazaar-like square, filled with shops, cafés, restaurateurs, and gaming tables; and the magnificent Luxembourg, were sure to be noticed by strangers.

The Louvre was still more attractive: I speak not of its external grandeur and majesty, but of the gallery of paintings and sculpture it contains. The Grand Staircase and the Saloons are arresting, but the Great Gallery, more than a quarter of a mile in length, filled with paintings, is astonishing in the extreme. Here are works of Caracci, Correggio, and Berghem, Cuyp, Dominichino, and Murillo, Guido, Raphael, and Rembrandt, as well as many of Teniers, Snyders, Rubens, and Salvator, Paul Veronese, Titian, Vandyck and Leonardo da Vinci. To these may be added the best productions of the best modern French painters.

So many strangers visit the Louvre, that few, I imagine, go there without seeing some one they know. The Sculpture Rooms struck me as very superior to those in the British Museum; but since then the new rooms in the latter establishment have been opened, which rival those of the Louvre.

While walking from one painting to another, my attention was attracted by two females, one young and the other old. The young one, well-dressed, drew her breath quickly, looked languid, staggered, and appeared ready to faint. My first emotion was sympathy, but as I moved towards her, I observed the old lady mingle with the throng, casting every now and then a glance towards me, to see, as I thought, whether I should pay any attention to the *invalide*. This put me on my guard, and I was hard-hearted enough to let the fainting fit take its course. Finding that I made no advances, the old lady returned, when the two went off together to another part of the gallery, once more to practise their deceit, with the hope of ensnaring the unwary.

What a crooked life is a life of deception! and how hard do the vicious sometimes labour to get that bread which integrity would easily obtain!

Paris is much better supplied with bridges than London, though the river Seine is not to be mentioned in comparison with the Thames. The Pont Neuf, which I had occasion frequently to cross was in itself a sort of museum, on account of the crowd of passengers, hawkers, ballad-singers, shoe-blacks, dealers in sausages and fried fish, print-sellers, fruiterers, and dog-fanciers, congregated there together.

The sagacity of a dog that I saw there very much surprised me; he would never take any thing offered to him with the left hand. It was of no use to attempt to deceive him by crossing hands, or by different people mingling their hands together, he always detected a left hand, and refused the cake it contained, and as invariably discovered a right hand, and snapped up the morsel it proffered.

From the Hotel de Montauban, where there were stables for forty horses, and numerous coach-houses, berlines were constantly setting off for Switzerland, Italy, and other places.

While leaning over the gallery surrounding the inner court, observing these departures, how did I long to extend my excursion! The hostess of the hotel insisted upon it that I spoke very good French; but I met with no other person in Paris who held the same opinion.

There is a bad practice in France, of bribing the postilions to take company to particular inns, and few things are more common than printed complaints on the part of the proprietors of hotels, attached to the back of their cards of address, such as the following:—

"Advice.—Ladies and Gentlemen, unless I pay the postilions to bring you here, they will do all they can to take you to other hotels."

In roaming through Paris, though the palaces and public buildings were full of interest, yet the manners of the people, the mingling of all ranks, the grotesque vehicles, the groups of odd figures, the ludicrous mixture of etiquette and ceremony with low life, and the shruggery and vivacity of the light-hearted inhabitants took my attention much more. The effect of all this was, I think, rather heightened by the circumstance of my knowing so little of the language; this made Paris

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to me a kind of pantomime, a series of ever-changing scenes, the meaning of which I had to puzzle out as well as I could.

The Hotel de Ville, the Observatory, the Mint, the Bank, and the Post Office, the Admiralty, the Exchange, the Arsenal, and the Barracks, were places at which I paused but little; while in the flower-market, Père la Chaise, and on the Pont Neuf, I lingered by the hour. Majestic piles and splendid erections excite astonishment; but the most amusing of all occupations to a stranger in Paris, is the observation of human character. The posture; grimace, and shrug of a French street-sweeper, taking off his hat, and bowing with the air of a courtier to an old fish-woman, would at any time call away my attention from the elaborate elegance of the Palais d'Elysée Bourbon.

It was a sad disappointment to me that I could not gain admittance to the Catacombs, but the place being considered unsafe, was closed to the public. The Cemeteries of Paris I saw, and gazed on the mournful spectacles of several bodies exposed at La Morgue. This place receives the remains of such as destroy themselves, or are killed by accident or design; here they lie publicly to be owned by their friends.

With regard to suicides, Paris is a guilty city; the numerous gaming-tables of the place excite avaricious passions; and life, frail as it is, is often held on the frailer tenure of the turn of a card. From the gaming-tables of the Palais Royal, the ruined gambler hurries off to the Seine, and plunges headlong into the devouring flood; ending a life of crime by a death of despair. La Morgue was to me a place of horror; for there death was shadowed and shrouded with the most fearful associations. "Lord, make me to know mine end, and the measure of my days, what it is; that I may know how frail I am." "Keep back thy servant also from presumptuous sins; let them not have dominion over me." And "so teach us to number our days, that we may apply our hearts unto wisdom."

The cemetery of Père la Chaise is of great extent, comprising about eighty acres. I entered it with strange emotions. We have now in the neighbourhood of London, and other large places, burial-grounds somewhat of a similar description, but few of them were then in existence. Père la Chaise seemed to me a fairy creation, an attempt not only to rob death of his customary solemnities, but to compel him to wear an air of cheerfulness.

The French in their giddy and light-hearted hours,
Change a churchyard of gloom to a garden of flowers.

Père la Chaise is a place of much attraction: its great extent, its diversified walks, and the full view of Paris which it commands; its varied monuments and memorials; and the cypress, laurel, rose, and myrtle-trees, which adorn them, all together render the spot very interesting. The monument of Abelarde and Heloise had a throng around it, the tombs of Labedoyère, and Marshals Ney and Massena, were not passed by unnoticed, and the resting-places of Fourcroy, Madame Cottin, Chenier, and Delille, seemed objects of research; but though I mused upon these, there were other things which struck me more.

A father brought his children to the urn where rested the body of their mother, and they wreathed it with a garland of fresh roses which they had brought; and a widow bent her knee at the simple monument erected over her husband. I saw the latter without trespassing on her sorrows. She offered up her prayers, she crossed her forehead and her bosom with her finger, and her face streamed with tears as she pressed her lips to the marble slab that bore the name of her once-loved companion.

Scenes like these are not English. In England we are too covetous of our grief to let the world around share it with us; we indulge in secret, and shun the public eye: it is not so in France.

As a promenade, a spot for a sentimental ramble, Père la Chaise is delightful; but as a cemetery for the dead it is opposed to British sympathies. To estimate foreigners and their customs by our own standard of feeling, would be neither generous nor just: they may be affected by that which affects us not; we must, therefore, leave the matter to themselves, reserving the right of expressing our opinion with fairness and freedom, wherein we differ from them.

To me, Père la Chaise was an innovation, a taking away of the awful solemnities which duly belong to the tomb, and a substitution in their place of sentiment, and poetry, and flowers. The

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grave ought to be an influential monitor; a churchyard is a volume, whose admonitions are usually sought when the heart is best prepared to receive them; and he who is softened and impressed by reflections on the dead is not likely to indulge in bitterness and injustice towards the living. The sombre and substantial erections raised to the departed, in an English burial-ground, unrelieved by lighter ornaments, give a depth and tone of feeling and reflection, that the little elegances of Père la Chaise are but ill calculated to excite. The great lesson set forth by the memorials of the dead should be this:—"Prepare to meet thy God," and the mind must be made solemn before it is likely to enter on this preparation.

Forget not, Reader, 'midst the proud control
Of wealth and power, and every prosperous plan,
Dear as they are to every living soul,
That these are mockery to a dying man.

Not only in the cemeteries, but in dress, food, manners, and almost every thing, a stranger sees a difference, to the reasonableness of which he can hardly reconcile himself. A cutler's shop furnished me with abundant amusement for half an hour. Some of the articles were laughably ridiculous in their construction, while others were much superior to any thing I had ever seen.

This unceasing novelty is, to a stranger, a source of untiring interest. The odd figures and grotesque grouping of the people in the streets of Paris, are of themselves worth walking "fifty miles barefoot" to see.

For a full hour I stood gazing on the site of the Bastile, and afterwards visited the place with a ticket of admission. A stupendous architectural elephant occupied the centre, so huge that the staircase was formed in one of its legs. How many miserable captives had languished out their days in the prison-house that once stood where I then was standing!

The place de Louis XV. between the Tuileries and the Elysian Fields is a memorable spot. It was here that the marriage of Louis XVI., then Dauphin, was celebrated, on which event some hundreds of spectators were crushed to death; and it was here also, that the same monarch fell beneath the guillotine, as well as thousands of his subjects. While I stood gazing on the place, the past came over me, and I fancied to myself the sanguinary scenes which had there taken place. I had no party feeling: I felt neither as a royalist nor as a republican, but as a man; and could almost have wept at the enormities brought about by the mutual errors of a monarch and his people. What an impressive lesson had there been read to mankind! With much emotion I penciled down my thoughts, a part of which I now copy from my common-place book:—

"Not mine the erring brow to brand,
To execrate the guilty hand,
Or deify the dead;
Enough for me that on this spot,
Mercy was exil'd and forgot,
And human beings bled.

Enough that here the crimson tide
Of ruthless slaughter wasted wide,
And whelm'd the bold and brave;
Rose o'er the daring and the strong,
The timid, beautiful, and young,
And swept them to the grave.

Degraded royalty, thy brow
Was dimm'd, dishonour'd, and brought low;
Loud rose the murderous yell,
When innocence and error's child,
Were mingled in disorder wild,
And vice and virtue fell.

Proud minion of a little hour,
Receptacle of passing power,
The page of history scan;
For though the mighty million fling
A name upon thee—call thee king,
Yet art thou still a man.

Though by thy awful hands be hurl'd
The bickering thunders of a world,
Some bolt may deal the blow;
Some vassal's angry arm, among
The meanest menials of the throng,
May strike and lay thee low.

Or prince, or peasant, draw thee near;
'Tis good awhile to ponder here;
Be trifling cares resign'd,
While memory, from her stores sublime,
Unrolls the bloody scroll of time,
To benefit mankind.

Here may the proud whose breasts aspire,
Whose hearts with unrepress'd desire,
And lust of empire burn;
And they who sternly would withstand
The haughty ruler of a land,
A mutual lesson learn.

Here may the' oppressor and opprest,
When passions agitate the breast,
Be taught to stem their sway;
And disciplin'd in such a school,
Monarchs, though mighty, learn to rule,
And people to obey.

The rafts of timber of very unusual dimensions, which were floated down the Seine, were to me objects of great curiosity. While watching one of these unwieldy masses, and wondering at the careless indifference with which the men upon it guided it down the river, a groom mounted on one horse, and leading another, rode into the water to give his horses a wash. In a little time, the

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animals were beyond their depth, and began to swim. By some accident the groom was thrown off the horse he rode, so that for some time he had to struggle for his life, being in imminent danger. At last he once more gained his seat, when, instead of feeling grateful for his deliverance, he began to belabour the poor brutes most unmercifully; he seemed a reckless being, careless of his own life, and equally so of the sufferings of the animals committed to his charge.

THE PHILOSOPHY OF COMMON THINGS.

THE LOOKING-GLASS.

The looking-glass is so common an instrument, that it is hardly necessary to describe it. It is, in fact, a piece of plate-glass "silvered" on one side. Before we proceed to an explanation of the philosophical principle of the looking-glass, it will be necessary that a description should be given of the manner in which it is prepared, so as to be capable of reflection.

The art of plating looking-glasses is erroneously called silvering, for not a particle of silver is employed. A piece of tinfoil of the size required is stretched upon a flat table, and upon it mercury or quicksilver is rubbed. As soon as the two substances begin to unite, a splendid surface is produced, and the tin is said by the workmen to be quickened. A plate-glass is then carefully slid upon the foil, in such a manner as to sweep away that part of the mercury which has not combined with the tin. Weights are then placed upon the glass, and the amalgamated foil is thus made to adhere to its surface. This is the process used in coating all those plates which are employed for looking-glasses.

The success of the above experiment depends upon the cleanness with which the operation is performed, for if the smallest piece of dirt should be on the glass, it will prevent the adhesion of the amalgam. About two ounces of mercury will cover about three square feet of glass.

It scarcely comes within the object of this paper to explain the manner in which the gilded frames that sometimes enclose the looking-glass are prepared; but a few remarks on the process of gilding will not perhaps be much out of place. The wood is first primed, that is, covered two or three times with a composition of boiled linseed oil and carbonate of lead. When the priming is dry, a thin coat of gold size is laid on. In about twelve hours this will be dry, and the artist may then apply the gold leaf, which is done in the following manner. The metallic leaf being cut into convenient sizes, each strip is taken up on the point of a small brush, and applied to the parts required. It is then gently touched with a ball of soft cotton and fixed to the size. In a few minutes it will be so firmly attached, that the loose pieces of gold leaf may be taken off by a large camel's hair brush. This is the method of gilding.

The purpose of the looking-glass is evidently to present a natural image of any object that is placed before it. All images are not accurate representations of the bodies from which they are cast. In the case of shadows this is well known, and it is not possible to look into many mirrors without becoming acquainted with the fact that the images they present are not alike. Images may be magnified, minified, or distorted representations of the bodies from which they are produced, and this will mainly depend on the figure of the reflecting surface.

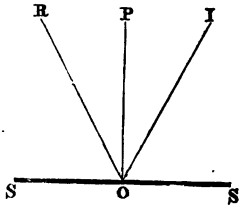
All the elementary scientific facts must have been observed, though they were not explained, by the earliest inhabitants of the earth. We can scarcely imagine a people, accustomed to wander over any country, cultivated or uncultivated, without becoming acquainted with the fact of reflection. Every river and lake would be observed to reflect the images of trees, plants, animals, and even of man himself. But if no other natural object had been observed, the appearance of the heavenly luminaries reflected from the surface of water could not have passed unnoticed. Homer, and other ancient poets, frequently allude to this, and similar phenomena. Sir Walter Scott has described it with all his force of expression and poetry of thought—

> "Late when the autumn evening fell
> On Mirkwood—Mere's romantic dell,
> The lake return'd in chastened gleam,
> The purple cloud, the golden beam;
> Reflected in the crystal pool,
> Headland and bank lay fair and cool;
> The weather-tinted rock and tower,
> Each drooping tree, each fairy flower,
> So true, so soft, the mirror gave,
> As if there lay beneath the wave,
> Secure from trouble, toil and care,
> A world than earthly world more fair."

The invention of mirrors would naturally follow an acquaintance with the fact

of reflection. In the writings of Moses, looking-glasses, or mirrors, (doubtless of polished metal plates) are mentioned. Callimachus, the Cyrenean, says, "She never looked into a mirror of brass." The Mexicans and Peruvians also were in the habit of using polished mirrors, when first discovered by the Spaniards.

The laws which govern the reflection of light were partially understood at an early period in the history of science, but are much more accurately known in the present day. When a ray of light falls upon a bright polished surface, a part of it is absolutely lost or stifled in the substance, and another and larger part is reflected. Now, it is frequently necessary to know in what direction the ray will be reflected, and by the application of one law this may always be done. We will take the simplest case for the purpose of illustration.

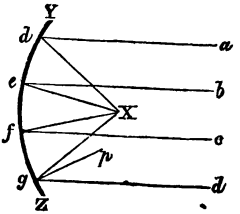


Let S S be a plane polished surface, such as may be obtained by a looking-glass, or a polished plate of metal. Let I O be a ray of light, falling upon this plane mirror; it will suffer reflection, and it is required to know in what direction that will be; we will assume it to be in the line O R. The lines I O and P O form the angle I O P, and that is called the angle of incidence. Now, it is found that in all cases the angle of reflection, which is P O R, is equal to it. This is true, whatever may be the form of the surface and whatever may be the direction of the incident ray, except when perpendicular, and it is then reflected in the same line.

From this one law it is easy to trace the effect which would be produced by the reflection of light from mirrors of differently formed surfaces. One or two cases may be mentioned as explaining the application of the law.

When parallel rays of light fall upon a concave surface, they are reflected, converging and meet in a point called the focus.

Let Y Z be a concave mirror, and *a b c d* several rays falling upon it at the points *d e f g*. From this they are



all reflected, converging to the point X, which is the focus. The reason of this is evident; *g p* is the perpendicle to the surface at *g*; *d g p* is the angle of incidence to the ray *d g*; and *p g f* is the angle of reflection. On whatever part of the surface the ray falls, the same thing will happen, and all the reflected rays will converge, and have some point of intersection, called the focus. A concave surface, may, in fact, be considered as a vast number of plane surfaces, inclined to each other. The point where the rays meet after reflexion has been called the focus, from a Latin substantive, signifying fire-place; because, when a concave mirror is exposed to the sun's rays, so great a heat is produced at that point, that an inflammable substance will be consumed.

When parallel rays fall upon a convex surface, and are reflected by it, they are thrown off in diverging lines. This the reader will easily be able to illustrate for himself, by applying the law already explained.

There are two circumstances with regard to the images formed by plane surfaces, such as looking-glasses, which may be mentioned. When any object is viewed in a plane mirror, the image appears at the same distance behind the mirror as the object is actually before it. This illusion is so strong, that both men and animals, when they first view themselves, evince considerable surprise. Birds have their peculiar passions remarkably excited by viewing themselves in a mirror. If a large looking-glass be placed before a cock, it is almost certain that he will instantly prepare himself for combat, and very speedily demolish the cause of his wrath. Another circumstance worthy of remark is, that an object viewed in a plane mirror appears but half its true size.

Cylindrical mirrors are of very little use in the construction of optical instru-

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ments, but are ground for the purposes of amusement. When any one views himself in one of these, if the direction of the axis of its concavity be perpendicular to the horizon, his visage will be uncommonly distorted, the breadth of the face being greatly diminished, and the length apparently increased as much. The drollery of the figure strongly reminds one of Homer's description of Thersites.

Upon turning the mirror a quarter round, the opposite extreme takes place, the image much resembling a piece of paper with two lines drawn upon it, one in black ink, the other in red. The eyes are elongated, so as to resemble the black line, and the lips the red; added to this, the extraordinary breadth of the countenance, and the ungovernable obstinacy of the image, is very laughable: if the mouth be opened, still the longitudinal one is kept shut, and only a thin white line is seen to run parallel along the centre of the red one, and that is produced by the teeth. "I removed," says one of the earliest experimenters, "the mirror a greater distance from my face, and then placed my finger on the right side of my nose; the image then put his on the left side of his nose. I could contain no longer, but gave vent to my inclination by a loud fit of laughter. Unhappy being! for the image now opened his mouth to such an astonishing extent, and his long countenance seemed so dreadfully convulsed with some uncommon passion, that I willingly let the mirror fall to the ground, determined that I would never look into another."

Anamorphoses are sometimes used with these mirrors, and considerably heighten the amusement they afford. They are pictures drawn of a shape so distorted, that when they are presented before the mirror the images assume a natural appearance.

Many beautiful natural appearances are caused by the reflection of light. The rainbow, haloes, twilight, and the colours of clouds are of this description.

It has been frequently mentioned in the "Visitor," that in consequence of the atmospheric refraction, the rays of light are bent, and actually reach the eye of an observer after the sun is beneath the horizon. But when refraction ceases to bring the rays to any part of the earth's surface, it is still illuminated by reflection from the clouds, and to this circumstance we may trace the origin of twilight.

Mirrors of various curvatures are employed by opticians generally in connexion with lenses, in the construction of microscopes, telescopes, and other philosophical instruments. By the use of these, we are able to examine objects under different circumstances, and enlarge our information concerning the nature and design of physical existence. Many other equally interesting subjects will be suggested to the thoughtful reader by a consideration of the looking-glass.

THE TYPE OF THE BRAZEN SERPENT.

Our Lord, in his interesting conversation with Nicodemus, says, "As Moses lifted up the serpent in the wilderness, even so must the Son of man be lifted up: that whosoever believeth in him should not perish, but have eternal life." Now, here it is evident our Divine Instructor teaches us to consider the dying state of the Israelites that were bitten by the fiery serpents, as an emblem of our perishing condition by reason of sin: the brazen serpent, elevated on a pole, as a type of himself expiring on the cross: the looking of the wounded Israelites to the brazen serpent, as emblematical of condemned sinners looking to himself with an eye of faith and depending on his own death; and the perfect recovery obtained by viewing this artificial serpent, as emblematical of that salvation which is through faith in his atoning blood. And to this, probably, there may be an allusion, when Jehovah says, "Look unto me, and be ye saved, all the ends of the earth."—*Booth.*

GRATITUDE FOR DELIVERANCE.

Treasure up what are more than ordinary dispensations of Providence, in which thou hast had a share. Hath thy barrel of meal wasted not, nor thy cruise of oil failed, according to what is written, 1 Kings xvii. 16? O forget not that hand of Providence which by the time thou hadst taken out one handful, and spent it, did cast in another handful! Hath God at any time checked a Laban, calmed an Esau, crushed a Herod intending mischief? O let such displays be written on the heart with a pen of iron and point of diamond.—*Crane.*

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SCRIPTURES ILLUSTRATED BY CUSTOMS IN INDIA.

THE following notices are contained in a letter of T. H. Baber, Esq., and are copied from the "Oriental Christian Spectator," published at Bombay.

The following subjects occurred to me illustrative of oriental customs mentioned in the sacred writings:—

1. The temples called Kehetrums, Ombaloms, Kawas, and Kotums, of the Hindoos, in both Malabar and Canara, from being frequently on the tops of hills, in the recesses of the forests, and their idols, where there are no buildings, placed in the midst of groves, call forcibly to mind numerous passages in the Scriptures, where the idolatries of the heathen are so distinguished, as well as those beautiful descriptions which the ancient poets, both Greek and Latin, have left us of the groves and retreats of their rural deities.

2. In the mode of building, observed by all the Hindoos of Malabar, there is something very analogous between the area or quadrangle in the centre of their buildings, called Nalapura, and the impluvium or cava odium of the Romans, both being alike exposed to the weather, and giving light to the house. This area in the hot season is usually sheltered by a pandal. Query.—May not this be the same as the *to meson* of St. Luke, where our Saviour and the apostles were accustomed to give their instructions?

3. The girding of the loins for running. If you refer to 1 Kings xviii. 46, I know of no such custom in Malabar, though the Scripture injunction of having our loins girded—thus *perizonnumi*, as used in Luke xvii. 8, and Acts xii. 8; also *anazonnumi*, 1 Peter i. 13; 2 Kings iv. 29, and ix. 1., may be considered as illustrated by the manner in which the natives wear their garments, or rather waist-cloths, for they seldom dress themselves, men or women, above the waist. This cloth, called moonda by men, and poda by women, is wrapped round the middle part of the body, being secured round the loins by a girdle or zoni, called todara, arignanum, alasa ooraka, made of gold or silver, the two latter containing mantram or yendrum (charms.) They also use these girdles for fixing their knives and poniards, which, like the ancient poniards, are made crooked, brevis gladius in arcum curvatus. But to my subject.

4. Amongst all ranks of Hindoo women their hair is "the instrument of their pride," according to the Scripture expression; and where nature has not been liberal in that ornament, the defect is supplied by art. Amongst the men, particularly the Nairs, their hair is made up into a bundle, though more frequently a large and long lock, called kooduma, is all that remains. Absalom's hair, which was weighed at two hundred shekels, 2 Samuel xiv. 26, might have been worn thus; and when sold applied to adorn the women in those days.

5. The custom of tinging the eyelids with antimony, or a kind of ink made from the juice of several plants, and which is common throughout India, I believe, is very general in Malabar, and is no doubt of the greatest antiquity. Thus Jer. iv. 30, painting the eyes with lead-ore.

6. "Grinding at the mill," as noticed by you, is not an employment amongst the Malabars, though the women of the highest rank busy themselves in what we consider menial employments, and even in the labours of agriculture. Every day may be seen at the proper season women of the first Nair families in this place, and every other part of Malabar, breaking the clods, and reaping the harvest. In other parts of India and in Canara, I have seen women grinding corn with hand-mills, sitting upon the ground with the mill-stones between them; and this I take to be precisely the custom referred to by the words "that is behind the mill," in Exodus xi. 5. Poole, in his Synopsis, gives a correct description of this stone-mill, or molus, or mola, as rendered in Latin, because mola e duobus constat lapidibus inferiore ac superiore.

7. The custom of wearing bangles, or shackles to their feet, also bracelets, call to mind "the tinkling with their feet," etc., for which the daughters of Zion were reproved in the 3rd chapter of Isaiah.

8. The charms set up against the evil eye, consist of cabalistical figures, and marks upon small pieces of copper, and upon ollas; the former, called yendrum, are placed about the waists of men. The women wear them round their necks, and they are supposed to secure them from witchcraft, sickness, and misfortunes of all kinds. This is similar to the manner in which the Jews carried their phylacteries, Ex. xiii. 9, Num. xv. 39, excepting that they wore these charms in their garments. As a counter charm to an evil

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eye, the Malabars stick up what they call naivara, distorted, and oftentimes obscene, figures of men and women, and monkeys, while they are building their houses, etc., and stamp in the inside of them the figure of an open hand.

9. The charming of snakes by means of music, particularly the pipe, is very common throughout Malabar. This is confined to a class of people called Korawara. They also pretend to cure the bite of the most venomous serpents, and other noxious animals. People of this description, I am aware, are to be met with in many parts of India; and I merely mention it, to show the affinity between these customs and those to be found in the sacred writings; for instance, "I will send send serpents, cockatrices, among you, which will not be charmed," Jer. viii. 17; "surely the serpent will bite without enchantment," Eccles. x. 11.

10. But the most striking resemblances to what we read of in holy writ, are the sepulchres, which have within these few last years been discovered near Calicut, of which the natives themselves can give no account, but what is truly absurd, and derived from their superstition, or, I should say, ignorance. They call them by different names, but chiefly gnyennennady kodam, and say they were the abodes of the living during the age when men survived their faculties, and did not see death, or Antagen, who, they say, was slain by Parmeeshwaran. These sepulchres are found on high rocky ground, which is hollowed into chambers, from eight to twelve feet square, and four or five feet in height, and contain large earthen vessels, with several smaller ones, which are supposed to have contained the bones or ashes of the deceased and his family, pieces of iron incrusted, and which fall to pieces on being handled; utensils, etc., are also found, which may possibly have been the instruments and utensils which belonged to the trade of the deceased. They may also have been designed for some religious use, like the *kistai ierai*, wherein the images of their deities, or holy water used in their ceremonies, were kept. One, in particular, I saw had every appearance of being a habitation for the living, one chamber, without cells, benches, or ornaments, about seven feet square and five high, and answering in every way to the sepulchre where our Saviour was laid, the only entrance being an aperture formed on one side of the rock and under ground, such as the entrance, or *thura*, before which Mary and John were obliged to stoop down ere they could look into it, John xx. 5, 11; some are made with a hole upon the top, (particularly one I opened within a yard of a bungalow I was occupying while on circuit at Calicut,) as well as on one side, which was covered with a large granite stone, like the opercula over the sepulchre of Lazarus.

PEARL.

The learned Bochart supposes that the word translated, in imitation of the original, *bdellium*, was the pearl. This opinion is countenanced in the Arabic version, and, by a reference to the place where it is said by the sacred writer to have been found, in the land of Havilah, which bordered upon the Persian Gulf, or Erythræan Sea, from whence the largest and best oriental pearls are obtained at this day. Pearls, though found in great numbers about Cape Comorin and the Island of Ceylon, are generally inferior in size to those brought from the Persian Gulf. Those that are found in different parts of America, and in the islands of the South Sea, as well as those which are met with in oysters and muscle shells on the coasts of France and Britain, have a milky coat, and are very inferior to such as are brought from the shores of Havilah. There is, therefore, a great propriety in attributing the production of pearls to a country which has not been equalled in this respect by any other country yet discovered. Moses had not circumnavigated the globe in scientific visitation, to spy out the varieties of each particular sea and strand, nor sent collectors to fetch pearls from all the sounds and friths on the face of the earth, to make a comparison between them; but God who made, knew the relative kind and value of each of his creatures, and communicated a part of that knowledge to his servant.

The inside of the muscle and oyster which produce the pearls, bears a certain resemblance to the pearls themselves; and hence it appears, that they are but the misappropriation of that matter which is secreted by the animal to form the shell. It is worth remarking, that the deviations of nature are thus instrumental in producing a jewel which has always held a second place after the finest

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gems. The pearl, when cut through, is found to consist of several *laminæ*, or coatings laid one over the other, as if formed by a successive deposition of layers of pearly matter. The material of which shells are compounded consist of a stony substance, and a glutinous one, which binds the particles of the former together. If this material, while floating in the body of the animal, meets with a particle which has by some accident been removed from the proper passages, and become stationary, we may suppose that it will adhere to it, and form a layer about it; which operation being successively repeated, produces, in course of time, those white pellucid balls which we call pearls.

Pearls are found throughout the whole substance of the animal; in the head, the coat that covers it, the circular muscles that terminate it, in the stomach, and, in general, in all the fleshy and musculous parts of the body. And, in confirmation of that account, which we have briefly given of the mode of their formation, some foreign particle is often found in the middle of the pearl when cut through, which served as a nucleus or centre for the commencement of that process.

Unio was a name given by the Latin writers to the pearl; whence we sometimes meet with union as synonymous with pearl. The origin of this word seems to have been a persuasion that each pearl oyster produced only one pearl, which is contrary to observation, as many of different sizes are often found in the body of the same animal, disposed in different parts. The celebrated Linneus gave out, that he possessed the secret of rendering a shell productive of pearls at pleasure. This was, perhaps, by drilling a small hole in the shell, and then introducing through it a minute grain of stony matter into the body of the wounded animal. It is well for the cause of humanity that no attempts have been made to turn this singular nostrum to any practical account.

Of the finest pearls the weight of one carat, or four grains, is worth 8*s*., but this price alone remains when the pearl weighs only one carat, for the price increases in what arithmeticians call the dupal proportion. If, for example, the pearl weighs four carats, then to find its price you multiply 8*s*. by four times four or sixteen, which amounts to £6 8*s*. Calculating their worth in this geometrical progression, it increases at a wonderful rate, so that a solid pearl, whose dimensions equalled the gate of a fortified city, be reckoned worth a price, which would, at the lowest computation, far more than pay our national debt. The vision seen by St. John, therefore, when it would set forth the costly nature of the gates or portals of the New Jerusalem, could not have chosen a more lively and impressive way of doing it, than by saying that each consisted of one entire pearl. But our idea of the preciousness of these gates is greatly increased when we remember that the wall was upwards of eighty yards in thickness, to which the frame of the gate must be adapted. And if we add to this, that the city occupied a site of 225,000 square miles in extent, and that the entrance of each gate must have been of an extraordinary breadth, to allow its vast population room to go in and out, we infer that the "world's wealth" would not have been equivalent to the value of one of them. A pearl brought, in 1574, to Philip II., though no bigger than a pigeon's egg, was valued at £14,400 sterling. And one a little larger, belonging to Cleopatra, was priced at £80,000. Another, now in the hands of the king of Persia, mentioned by Tavernier, was bought of an Arab for £110,400,—an enormous sum for a jewel, which does not equal a common hen's egg in magnitude.

The pearl fisheries of the East are,

1st, The island of Bahrein, or Baharem, in the Persian Gulf.

2nd, Catiscer, on the coast of Arabia Felix, over against Bahrein.

3rd, Manaar, a sea-port in the isle of Ceylon.

The pearls fished here are remarkable for their roundness, and the fineness of their water, or clearness, but they seldom exceed two carats or four grains in weight. Hence those found in the Persian Gulf greatly surpass them in value.

"Again, the kingdom of heaven is like unto a merchant man seeking goodly pearls: who, when he had found one pearl of great price, went and sold all that he had, and bought it," Matt. xiii. 45, 46. One may easily gather from the prices of pearls recorded above, that a merchant man might give all that he was worth for one pearl, and yet be a vast gainer by the bargain. We have a merchant seeking after pearls, by sea and by land, who by chance meets with

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a pearl, by the purchase and resale of which he is sure to make his fortune. The story in the parable might easily be true in experience, for in those times especially, a merchant might in his travels meet with a pearl, the price of which amounted to the value of his whole stock. But still the price it might be sold for, where its value was better understood, might be so great, that the profit would be equivalent to a retiring fortune. If, for example, he gave £10,000, and sold it for £60,000: £50,000 would be a large fortune. He might then feel it no longer necessary to forego the comforts of home to brave the dangers of the deep, or encounter the perils of robbers. He might return, and spend the remnant of his days in peace and ease in the bosom of his family. Thus it fares with him who finds a pearl of great price in the love of Christ. To obtain this he is willing to part with all he has, not with the blind hazard of speculation, but with the sober certainty of realizing an eternal weight of glory, in the presence of Him who has loved us, and washed us from our sins, and made us kings and priests to reign with him for ever.

OLD HUMPHREY ON THE BEAUTIES OF CREATION.

I TAKE up my pen under a feeling persuasion of the almost utter impossibility of imparting to others, or even of enabling them to comprehend, my emotions, at particular seasons, when gazing on the works of creation; and I regret this the more, because those who have feelings more lively than those of their neighbours, run some risk of being set down as enthusiasts and visionaries.

Willingly would I pass for a plain old man at all times, more prone to draw a profitable lesson from the works of creation, than to indulge in idle ecstasies and useless sentimentality; but, sometimes the boundless beauty of creation so bursts upon me, so takes me, as it were, by storm, that I cannot do otherwise than surrender up, for the moment, my whole being to the delightful occupation of feasting my eyes and my heart on the banquet before me, and of adoring the Almighty hand which has not only spread an intellectual table for me in the wilderness, but given me a keen appetite to relish the repast.

I well know that the picture of an old man regarding the rising or the setting sun, a passing gilt-edged cloud, a brook, a waterfall, a tree, a shrub, a bird, a butterfly, a flower, or a blade of grass, as the case may be;—I well know that for such an one to regard these things in a transport of delight, may, in the estimation of many, border on the ridiculous; but Old Humphrey is one that does not often hide his natural feelings because they may furnish a little pleasantry to his friends at his expense. While the bursting bud and the warbling bird make my heart beat with joy; while the kindling heavens draw tears of grateful emotion and admiration in my eyes, I will tell you that they do so, and you may laugh at me as long and as loud as you please.

It would hardly be wise in me to indulge in fairy tales, to build castles in the air, for you to admire when you could not inhabit them, or to draw scenes of hanging gardens and oriental imagery far beyond your reach. No; my scenes, for the most part, are those that are round about you. He that is blest with eyesight, and with a grateful and susceptible heart, has only to gaze on the earth or the heavens, to be filled with joy and thanksgiving.

I am a dear lover of nature, and when painting her likeness, I would not be bribed to give a false tint to a sere leaf, nor a wrong crook to the thorn of a bramble. If I were wilfully to falsify the resemblance of the giant oak, or the dwarf medlar, the towering cedar, or the creeping lichen, I should feel as I suppose a man feels who has committed forgery.

It was only a few evenings ago that I stood by the side of a secluded pond, at the hour of eve. At either end of the pond rose an oak tree, the one was tall and wide spreading, the other stunted, but both gorgeous with foliage.

Between the trees was a high bank of bushes and brambles, wherein sprang fine long grass, and bright yellow reedy stems, among which straggled the viny tendrils of the black briony, and the slender wires of the wild convolvulus. The whole bank was a tangled confusion, a glorious assemblage of grateful tints; rich greens and glowing browns were enlivened with scarlet hips and hawthorn berries.

While I gazed with admiration, the oblique rays of the sun enriched the

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pond and the bank, the varied lights and the deep shadows gave a wondrous interest to the scene before me.

The sky, the trees, the bushes, the brambles, the straggling wires, and scarlet berries, were all plainly reflected in the clear dark waters. A dry leaf fell, however, from the bending branches of the oak, a light breeze rippled the surface of the pond, and the whole scene became animated in the reflecting water. But my description is poor and tame. The whole was entrancingly beautiful, and I could hardly endure my emotions of joy.

I left the pond to gaze on a far more glorious scene, and to partake a yet more exalted gratification. The sun, the brightest object in creation, was about to set.

Oh, it was glorious, in the midst of all my weakness and unworthiness, to know and to feel that I was God's creature, gifted to gaze on his beautiful creation, and to thrill with overpowering emotions at the soul-absorbing spectacle before me. To the east, lay a range of murky, mountainous hills, on which the dark, and almost inky, clouds seemed to rest, as they slowly rolled their heavy weight along the lower part of the heavens. In the south, the woods and coppices, rich with the coloured tints of autumn, were illumined with the straggling rays of the declining sun, and right in the west a big black cloud stretched itself across the sky, with edges of gold and silver, bright even to intensity. Behind the cloud was ensconsed the sun, flinging right and left, above and below, his glittering beams. I clasped my hands with transport, and while I gazed on the glowing scene in an ecstacy, the sun thrust forth below the dark cloud, pouring his unendurable beams in a torrent of light, full in my face, blinding for a season the enthusiastic idolater who was so engrossed in admiring the king of day, as for a season almost to forget his Almighty Maker, the King of kings and Lord of lords!

Silent, solemn, and sublime was that glorious and gorgeous spectacle. Subdued, even to tears, I faltered a prayer to the Father of mercies, that while his glorious creation produced such entrancing emotions of wonder and joy in my heart, his grace might fit me, despite of all my unworthiness, to discern the greater glories of redemption, so that I might know him, and adore him, and love him, and obey him, and rejoice in him, for ever and ever!

PREPARATION OF FLAX AND HEMP.

Linen is a kind of cloth usually constructed of the thread of flax; but sometimes hemp is also employed. Linen has been long used as an article of clothing. From the earliest periods of the Egyptian history, we have evidence of its use among that people. The bodies of the dead were always swathed with it, and, in all probability, it was the common article of dress. Among the Romans it was not used till the time of Alexander Severus, who was the first emperor that wore it; and it was not till a long time after his death, that it became a common article of dress.

Many writers think that the manufacture of linen goods was introduced into England by the Romans, a supposition supported by strong probability; for we not only know that this people endeavoured to promote the arts among the uncivilized tribes they conquered; but we have also evidence in the present day, of the zealous efforts they made to introduce the art of building, and the comforts of life, among the rude and barbarous aborigines of our native land.

The introduction of the cotton manufacture, and its surprising increase, may be considered as the causes why the linen manufacture has not attained that pre-eminence among us which might naturally be expected.

In the year 1693, King William III. received a petition from both houses of parliament, stating that the woollen manufacture of Ireland had so far surpassed that of England, it was expedient for the well-being of the latter, that some impediments should be thrown in the way of the former; and praying him to establish the linen manufacture in its stead. The king returned answer, that he would do all in his power to discourage the woollen manufacture of Ireland, and to promote the trade of England. Soon after this, the government prohibited the exportation of all woollen goods from Ireland, except to England; and such heavy duties were levied, that the Irish soon found themselves unable to compete with the English manufacturers. This unjust and short-sighted

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policy excited some murmuring among the Irish, but the parliament and government succeeded in their object; the woollen manufacture was destroyed, and the linen introduced. The Irish linen trade has been ever since supported and protected by legislative interference, but whether this has been advantageous may be fairly doubted; we believe the manufacturing interest would have been in a more healthy state without this intended assistance. Even in the year 1830, bounties were granted for the exportation of linen goods, as well as premiums. In the year 1829, the bounty alone, although it had been then much decreased, amounted to nearly £300,000, or nearly one-seventh the value of the goods exported that year. Such a system was calculated to produce an indifference to all improvement, and such was in fact the effect. Besides this, the foreign markets were supplied with goods at a price less than they cost.

"There is no reason to doubt," says a writer on this subject, "that were the various sums expended in well-meant, but useless attempts to force this manufacture, added together, with their accumulations at simple interest, they would be found sufficient to yield an annual revenue, little, if at all inferior to the entire value of the linens which we now send abroad." These bounties, however, are now withdrawn, the duties upon flax and hemp have been removed, the ridiculous attempts to force the growth of the raw material at home have been given up; and the manufacture has already assumed a more healthy appearance.

Flax is a plant more or less cultivated in nearly all European states, and is found in its wild state in many foreign countries. It is an annual plant, and the seed, which must be of the previous year's growth, is sown between the second week of March and the middle of April. At the end of July or middle of August, it is ripe, and fit for pulling. It is frequently sown with clover-seed, which is then an after-crop. Agriculturists inform us, that it succeeds best in a rich deep loam, and that any ground, which has the previous year yielded a good crop of barley, turnips, or broad clover, is suited for flax.

Hemp is supposed to be a native of India, but is now grown in many other countries, and is an important article of commerce. It is employed extensively in the manufacture of cordage, and is also sometimes used in linen goods, although it has a much stronger and coarser fabric than flax. In Russia, Poland, and Italy, it is extensively cultivated; a small quantity is also grown in Ireland, but it is not sufficiently profitable for the British farmer. Sailcloth is the fabric in which hemp is most extensively employed; it makes excellent huckaback for towels and table-cloths. The Manilla hemp, obtained from the banana tree, is very abundant in the Philippine Isles, and is an excellent material for the cables and rigging of vessels. The Riga hemp is preferred in this country, andsells at the best price.

From these remarks it will be evident, that although hemp is occasionally employed in the manufacture of what are called linen goods, yet flax is the principal and proper fibre. Our remarks, therefore, in explaining the preparation and manufacture will, for the most part, apply to the latter substance.

When the flax is full ripe, and pulled from the ground, the first process must be, to separate the useful fibre from the other parts of the plant. This is situated between the interior wood and the bark, and has been for ages obtained by a process called water-rotting; that is, by rotting away the wood, the fibre being able to resist for a considerable time the solvent power of the water. This process is one of great antiquity; it was used by the Egyptians, and from the time in which they lived, till very recently, by all modern nations. There are, however, many objections to it, and especially the injurious effect it has upon the health of the inhabitants and the cattle in those districts where it is performed. It is well known that no country is so unhealthy as one in which a large quantity of vegetable matter is in a state of rapid decomposition.

The reader will perhaps remember the disastrious results of the expedition to explore the Congo, a large river in Western Africa. In a few days, nearly all those who were engaged in following the course of this river, were carried off by fever and other diseases, produced by the noxious vapours arising from decaying vegetable matter. It is the opinion of persons who are capable of judging, that the many pestilential diseases to which persons are subject in the neigh-

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bourhood of Rome and Naples, may be traced to the same cause; and in all places where large quantities of flax are in preparation by immersion in water, diseases become more numerous and violent.

The operation of rotting is one which requires the greatest care, and as it must be done as soon as the flax is ripe, about the month of August, it is exceedingly troublesome to the farmer, who is then anxious to devote all his time to the ingathering of his corn harvest. No fixed time can be stated as sufficient for the decomposition of the woody fibre, as it is, in certain cases, hastened or retarded without any evident cause. If it be macerated too long, the fibre is destroyed as well as the wood, and if not long enough, a portion of the woody matter is left, and the flax will not dress well. In the very first process of the manufacture there is, therefore, a danger of destroying or injuring the crop.

The watering of the flax is generally performed in the following manner:—An artificial pond or canal is excavated near some river or other reservoir, where water can be obtained. A space, forty feet long, six feet wide, and four feet deep, is sufficient to receive the produce of an acre. The flax is then bound in bundles, and thrown into the water, one upon the other, so that the weight of the uppermost causes those which are beneath to sink. Hurdles or boards are then placed on the top, and sufficient weights are added to cause all the flax to sink beneath the surface of the water, but no bundle is allowed to touch the bottom. In about a fortnight the operation will be completed, and the bundles, which will then be exceedingly soft and liable to injury, are removed on boards, and spread out on short grass. Here they are allowed to remain for some time, exposed to the dew and occasional showers, which not only complete the decomposition, but also wash away the decomposed matter which hangs about them. After about a month's exposure, and when perfectly dry, the bundles are carried away, and are ready for the next process, which is the breaking away of the brittle woody fibre that remains, technically called the boon.

It has been the custom for many ages, to separate the remaining woody matter from the useful fibre, either by hand, or by a simple machinery. In the first method a mallet was used; but more commonly it was done by a breaker. This instrument consists of a set of blunt iron teeth, which are fixed in a solid piece of wood, and meet another set of teeth fixed in a moveable piece; this is worked with one hand, while the other supplies the flax. When the wood has been broken into small pieces by either of these methods, the flax is beaten against a smooth post, called the scutching post; after which it is again beaten by a small hand instrument, which greatly resembles a curry-comb. By these operations the flax is prepared and comes into the hands of the hackler as a long fibre.

The inconvenient and unhealthy method so long adopted of preparing the flax would, before this, have induced many mechanists to attempt the invention of some machine suited to perform the operation, had flax been sufficiently cultivated in this country to offer the prospect of remuneration. This was attempted in the year 1812, and a patent was obtained for the invention. Since this period, Mr. Bundy, of Camden Town, obtained two patents, one for a machine he calls a breaker, and one for a rubber. The former is intended to separate the bark from the useful fibre; and the latter to rub and separate the fibres, bringing them into that state fit for the hackler.

Hackling is that process by which the fibres of the flax are straitened. The instrument by which this operation is performed, consists of a number of teeth fixed upright in a flat board. When firmly attached to a bench, the workman draws the flax rapidly between the teeth; and when the combing or hackling has been performed with one instrument, the workman takes another which is finer, and continues to repeat the process, until the requisite degree of fineness has been obtained.

When the flax has been thus prepared, it is given into the hands of the manufacturer. To trace the several processes by which it is converted into linen is not necessary, for they scarcely differ in principle from those already explained in our description of cotton spinning. Some parts of the machinery are constructed in a different manner, but there is so great a similarity in the operations, that to follow them in detail, would be little more than a repetition of what has been already said.

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TRUE KNOWLEDGE IS HUMBLING.

Young scholars are the proudest. Duarenus used to say of those that came to the university the first year, they were doctors in their own conceit; the second year they were licentiates; and the third year, students and learners. None of the apostles outstripped Paul in the knowledge of God and Christ, nor did any arrive at an equal measure with him; neither did any of them equal him in his humility, for he sets himself upon record to the world as the least of all saints and the chiefest of sinners. The more clear the revelations of God are to our souls, the more voluntary disannulments there are of ourselves. The angels, that have the nearest approach to the Deity, and the richest prospect of his glory, cover their faces with an awful sense of his Majesty. A great stock of knowledge debases a wise man in his own eyes, because it impresses him with a sense of his own weakness to get to the top of the mountain which he would reach by his inquiries. Socrates, who was the most knowing man of his age, was sensible that he knew nothing; because the more a man knows, the more he finds his own ignorance, and his inability to shake it off: and that the things of which he is ignorant far exceed those which he seems to grasp in his understanding. So it is with the Christian; he is sensible that what he knows of God and Christ is inconceivably less than what remains to be known. The more any man sees of God, the lower he falls in his own eyes.—*Charnock.*

THE SUITABLENESS OF THE GOSPEL.

How admirably adapted is the economy of redemption to our apostate state! Are we miserable, in consequence of sin? God is merciful through the propitiation which is in the blood of Christ. Are we unworthy? God is gracious. Are we to the last degree impoverished? God is immensely bountiful. The spiritual benefits which he confers are absolutely free gifts; and gifts, we know, are not purchased, but bestowed; not obtained upon conditions to be performed, but received as matters of mere favour. The blessings of Divine grace were not intended to recognise moral worth, but to relieve the indigent; not designed to indicate holy qualities in the receiver, but to display generosity in the Giver—*Booth*

DIVINE CHASTISEMENTS.

As it concerns us to observe when the creatures become corrosives, so it does also to improve this corroding dispensation. Let it be a means to eat out the proud flesh of some sin or other, which is the procuring cause of all. The creatures frown; but doth not God frown on some sin, in their frowning? It would better become those who cry out against their superiors, to consider how the taking cold in the feet is often the cause of disorder in the head. The sins of people, wives, children, servants, are the cold vapours which cause a distemper. The headache of some above others, becomes a heartache to and from those below others. View sin, then, so as to be more abased for it, and creatures less in the way of disquiet. So the prophet teaches, Lam. iii. 40. The overtaking of sin with hue-and-cry, is the best remedy under such maladies.—*Crane.*

EXCELLENCY OF THE BIBLE.

The Scripture of the Old and New Testament is a most solid and precious system of Divine truth. Every part thereof is worthy of God, and altogether is one entire body, wherein is no defect, no excess. It is the fountain of heavenly wisdom, which those who are able to taste, prefer to all the writings of men, however learned or holy.—*John Wesley.*

AFFLICTION.

When you see the refiner cast his gold into the furnace, do you think he is angry with the gold, and means to cast it away? No, he sits as a refiner. He stands warily over the fire, and over the gold, and looks to it that not one grain be lost. And when the dross is severed, he will out with it presently; it shall be no longer there.—*Crisp.*

HUMILITY.

Generally speaking, those who have the most grace, and the greatest gifts, and are of the greatest usefulness, are the most humble, and think the most meanly of themselves. So those boughs and branches of trees which are most richly laden with fruit, bend downwards, and hang lowest.—*Gill.*

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New Inn, Gloucester. See page 405.

ENGLISH HISTORY.

MANNERS AND CUSTOMS, AND MISCELLANEOUS PARTICULARS, FROM THE NORMAN CONQUEST TO THE DEATH OF RICHARD III.

BOOKS AND PRINTING, AND THE ENGLISH LANGUAGE.

THE most important discovery during the period under consideration, was the art of printing; but its effects, great and rapid as they were, did not begin to be generally manifested till a later period. The first book printed in England was at Westminster, in 1474, by William Caxton, as already noticed: see pages 297 and 304. When a book could only be produced by the slow operation of writing, literature was confined to a comparatively small number. The profession of a scribe was respectable and well paid; and we find from the Paston letters that the cost of writing a book in 1469, containing about two hundred leaves, was thirty-one shillings and fourpence, the wages of a mere copyist being about double those of a skilful artificer in handicraft. Most of the manuscripts were produced in the abbeys and monasteries. A part of the building frequently was set apart for this work: by far the greater portion of books thus produced, however, were the complicated Romish service books, and legends of saints. In the plunder of the abbey of Abingdon, A.D. 1517, were found two hundred and forty psalters, grayles, and missals, all of which were service-books, but only twenty-two other manuscripts. Some copies of the Scriptures, usually with glosses and comments, were produced, and a few works of a scientific character, including some moral treatises. Most of the latter, however, were in accordance with the scholastic pursuits and the imperfect philosophy of that day, and are now of little interest, and devoid of use; and a large proportion are occupied by the worse than profitless discussions of the schoolmen, who would solemnly argue such questions as those of Thomas Aquinas, How an angel passes from one place to another—Whether a child born in a desert could be saved without baptism—Whether God could annihilate matter, with others still more blasphemous. Other questions were more harmless, though equally useless, such as the famous discussion, debated for centuries and never decided, Whether a pig led to market by a rope round his neck, was led by the rope, or by the man who held it!

Books of any size were costly articles, and were given with all the formality of bequest, by will, and often the right of perusal was reserved to the donors, or

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their nominees. In some establishments a book was allotted to each monk for a year; in other instances, no scholar was to keep a book more than an hour or two, at one time, that others might not be hindered from access to the same. The library in the wealthy abbey of Glastonbury, in 1248, consisted of four hundred books. Humphrey, Duke of Gloucester, gave six hundred books to the University of Oxford, which was considered a princely gift, one hundred and twenty of them being valued at one thousand pounds.

It was by degrees that a more general taste for literature prevailed. The intercourse with the East gradually introduced many inventions of vast importance, such as the mariner's compass, combinations of substances, which led to the discovery of gunpowder, the manufacture of glass, and other improvements. Also the introduction of many sorts of fruits and esculent vegetables, and especially the Arabian notation and arithmetic, with the rudiments of chemistry, must be noticed as being brought from the east. The sciences gradually made progress, which in the end did away the barbarisms of the Aristotelian philosophy; but as yet these important results were only as "coming events, casting their shadows before."

The writings of Athelard of Bath, Friar Bacon, and others, show that they were acquainted with many Arabian authors. The Jews were very instrumental in making these writers known to the philosophers of Europe, and more may be due to the attendants on the crusaders, and the religious orders who accompanied them, than to the ignorant and half-barbarous knights and nobles of that period. Poetry had a more immediate effect upon literature, and in producing mental cultivation. The Anglo-Normans encouraged this taste; it was promoted by chivalry, and, though for a time disgraced by much that was evil and licentious, yet it became gradually more refined. A taste, fostered by the study of the Latin writers, encouraged this improvement, and we have seen that some early English monarchs were patrons of literature.

The seeds of the Reformation, also, were instrumental in promoting a taste for reading. The translation of the Bible into English, by Wickliff, with the "Poor Caitiff," and other popular tracts of those times, spoke to the hearts of the people. Many a hand was employed in transcribing portions of Scripture, and little tracts, whose skill would not have been thought sufficient for more elaborate and learned works.

The Wickliff and other manuscripts that still exist in our public libraries, are interesting proofs of this popular desire; and in the records of those times we find the eagerness with which the Romish ecclesiastics persecuted all who dared to possess those humble, yet heart-stirring productions. These short and simple writings appealed to the understanding and common sense of the reader. Devoid of subtleties, they went at once to the heart, and showed the humblest peasant that he had a soul to be saved, and a Saviour whom he must seek for himself. The difficulties in procuring these tracts and books, when all had to be written by the pen, was very great; and from a public record it appears that, in 1429, the price of a written English Testament was £2 16*s.* 8*d.*, equal to more than thirty pounds of our money, and then more than half the usual annual income of a clergyman in charge of a parish. A complete English Bible would have cost the labourer the whole earnings of several years. Now he may purchase a Bible for three shillings, and thus possess himself of the Scriptures complete at a less cost than two days' earnings of the common labourer. The word of God was, indeed, precious in those days: there was no open vision—no public preaching of the word. As already noticed, at one period, Wickliff, and a few others, preached in some few churches, and by the way side, but that was soon stopped. Darkness covered the land, and gross darkness the people; the glimmering of a bright and glorious day began, however, to appear.

The popish establishments in England were attacked by other literary productions; some of the severest reflections on ecclesiastics are contained in Piers Plowman's Visions, and Chaucer's Canterbury Tales, written about the fourteenth century.

The English language, undoubtedly, is formed from the Saxon; during the period from the Conquest, it was modified by the introduction of many foreign words and phrases. For a time it was laid aside in all public documents, and the Norman French was used by the higher classes. The earliest English public document known to be in ex-

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istence, is attributed to the year 1343; but the writings of Wickliff, and their diffusion among the common people who listened eagerly to their contents, did much to bring the language into that state in which it may be said to have been fixed by the art of printing and by the Reformation.

The following shows the contrast between the Saxon English, prose and poetry, about A.D. 1200, and the vernacular language of the fourteenth century:—

"Mildeliche I mune you, mine dere frend, arme and edilede luvende, that ye all drede yure drihten Crist, luvend him and lien for he is louvord of lif. He is one God over all goodnesse. He is one blisse over alle blessednesse."

"The hit was dai margan,
And dugethe gon sturien,
Arthur tha up aras,
And stretche his armes,
He aras up, and adun sat,
Swile he were swith seor."

The following is from Matthew viii., in Wickliff's version of the New Testament:—

"But whanne Jhesus was come doun fro the hill myche pueple sueden him: And lo a leprous man cam and worschipide him, and seid, Lord if thou wilt thou maiest make me clene. And Jhesus helde forth the hond, and touched him, and seid, I wole: be thou maad clene; and anone the lepre of him was clensid. And Jhesus said to him, Se, say thou to no man; but go schewe thee to the prestes, and offre the gifte that Moyses commaundide in witnessing to him."

MEDICAL KNOWLEDGE.

Of the progress of medical science much cannot be said, though some light from Arabia and the East had been thrown upon the important art of healing. It is sufficient to state, that in the reign of Henry III., wrappings and bed-hangings of scarlet cloth were considered efficacious for the small-pox; and that at a later date, boiling oil was poured into gun-shot wounds. The barber and the surgeon were the same person. The Doctor of Physic, the highest rank in the healing art, is described by Chaucer:—

In all this world ne was there none him like,
To speak of physic and of surgery;
For he was grounded in astronomy,
He kept his patient a full great deal,
In hours by his magic natural:
Well could he fortune the ascendant,
Of his image for his patient,
He knew the cause of every malady,
Were it of cold, heat, moist, or dry,
And whereof engendered was each humour.
He was a very perfect practiser,
The cause iknow (being known) and of his harm the root,
Anon he gave to the sick man his boot: (help,)
Full ready had he his apothecaries,
To send him drugs and his lectuaries,
For each of them made other for to win,
There friendship was not new to begin.
In sanguine, (scarlet,) and in perse, (sky blue,) he clad was all,
Lined with taffeta and with sandall,
And yet he was but easy of dispence
He kept that he won in time of pestilence,
For gold in physic is a cordial,
Therefore he loved gold in special.

Chemistry as yet was almost unknown, excepting in the form of alchymy, the vain research after means to transmute common metals into gold or silver. In this attempt many wasted their time and their means, and then often duped others into similar pursuits. Yet from this worthless employment originated many of the chemical discoveries of the succeeding ages, and probably that of gunpowder, which in the event has totally changed the practice of warfare, and placed the common soldier on a level with the knight and the noble in this occupation.

EDUCATION.

General education was not thought of. Alfred had given an impulse which might have led to considerable progress in this respect, but the Norman invasion, and the studied depression of the mass of the English nation, counteracted every tendency to improvement in this respect. The monasteries, however, were schools for the novices, and younger ecclesiastics, and the universities were crowded by students, much younger than those of the present day. In the great and noble families, young men of good birth were placed as pages, and gained some instructions as well as accomplishments. Females were more restricted to home education, excepting in the higher ranks, who were admitted into the nunneries and families of rank, and there received instruction in music, needlework, the more elegant branches of cookery, and some insight into the art of healing. The writer of a work upon female education, in 1371, found it necessary to argue in support of the proposition that it was good for women to read the Bible, but he gives up writing, and considers that women had best have "nought of it." There

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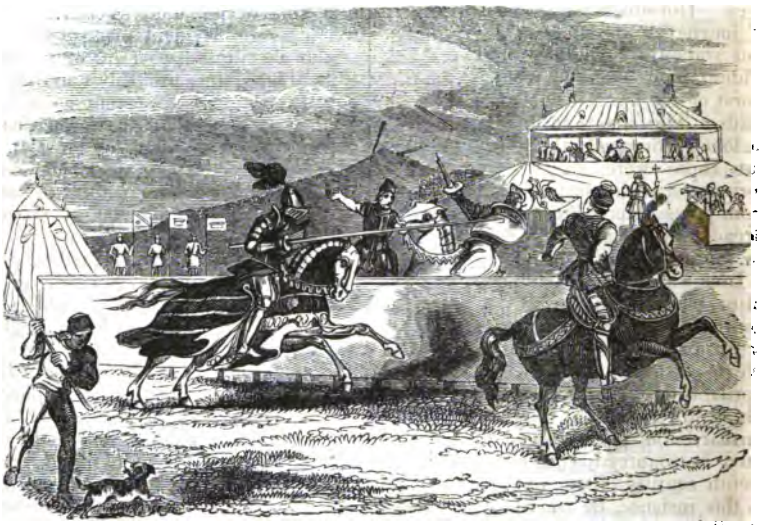
were, however, many females of rank, remarkable for their learning and abilities. A passage in Chaucer mentions, about the year 1390, "a schole for girls, at Stratforde of the Bowe." The instruction there given which he chiefly notices, bears some resemblance to the education of our modern seminaries; it was a sort of school French, and not to wet more than the tips of their fingers at meals. The silver-fork instruction could not then be given, as forks were unknown, but sopping about the plate or trencher with a piece of bread in the fingers, probably then, as now, was the most approved fashion.

One of the plans to check the knowledge of the truth, as taught by Wickliff and his followers, was to prohibit resort to private teachers. This, with the civil wars, checked learning, and in 1477, the clergy of London petitioned for leave to set up schools in their churches. This led to the establishment of grammar schools, and parochial schools, but they belong to a later period. How great the change in our day, when the meanest peasant in almost every part of the land can procure instruction for his child, which most of the proud knights of the middle ages could not obtain. That the soul should be without knowledge is not good; it is, however, most important, that the knowledge be such as makes wise unto salvation.



The Tournament.

AMUSEMENTS.

We have noticed the cruel devastations of William I. in forming the new forest. Afterwards parks were inclosed for preserving wild animals. The earliest was walled in by Henry I. at Woodstock: it inclosed a tract seven miles round.

As the nobles of this period paid little attention to literature, they had much leisure for diversions of various kinds. Among these, tournaments, or martial sports, were very conspicuous; in which various combats were performed by knights and esquires, and prizes distributed to the victors. These amusements were suited to the chivalric taste then prevalent, and are said to have been introduced into England by Richard I. for the purpose of rendering his knights expert in the use of arms. A tournament was always attended with great danger and useless expense. Archery was also a common pastime. In the reign of Edward IV., it was ordained that "every able-bodied man shall daily practise archery, because the defence of the kingdom dependeth upon archers; and that no man shall play at unlawful games, as coits, foot-ball, and the like." Hunting and hawking appear to have

been favourite diversions of the Anglo-Norman nobles and princes. An historian of these times says, "They prepare for these sports with greater anxiety, expense, and bustle, than they do for war; and pursue wild beasts with greater fury than they do the enemies of their country." Various kinds of gaming were practised, and attended then, as in all ages, by much evil to the gamesters and society at large: though certain penalties were imposed in the year 1190, these pernicious games seem to have been still ardently pursued.

TRAVELLING AND INNS.

To travel from home was a serious undertaking even a hundred years ago, much more so in the period under consideration. It was not safe nor common to travel on foot, excepting on pilgrimages. Horseback was the usual method of journeying for persons of every rank and station. The roads were very bad, seldom more than mere tracts, like the worst of the few remaining parish cross-roads. The aged and infirm were occasionally dragged along in carriages, but those were mere carts without springs, or with a sort of hammock slung from poles. Horse litters, as represented already, were sometimes used: see Visitor for 1837, page 371.

Inns were rare and unknown till the latter part of the period. Travellers sought for accommodation in monasteries, or in private houses, when the night overtook them. The ancient inns were similar to the one represented on page 401, which still remains at Gloucester. When similar buildings are found to have existed in country towns, before the sixteenth century, they may generally, as in this instance, be traced to the resort of pilgrims and others to a neighbouring shrine bringing more than the monastic brethren chose to harbour. The chambers were above, opening into galleries ascended by stairs from the court yard. The rooms below were for eating and business. These inn-yards were often used for scenic or theatrical representations. The spectators stood or sat in the galleries. The actors strutted out from behind a curtain hung at one side, and delivered their speeches. The dramas of this period were chiefly histories from Scripture, prepared and arranged by the ecclesiastics: many were of a most extraordinary description, and profanations of God's word.

When goods were conveyed from one inland place to another, it was chiefly on pack horses. Thus we find a horse-load of oysters sent to John of Gaunt, from Colchester: and when Paston sent from Norfolk to London for a hat in the fifteenth century, the carrier was to wear it on his ride homeward. The internal conveyance of bulky articles of food was difficult, and rendered more so by the taxes demanded by every town, or great landholder through whose boundaries the commodities passed. Thus there was no encouragement for the farmer to grow more than his own neighbourhood could consume, unless he had the benefit of water carriage; and canals were then unknown. In the year 1258, corn at Northampton was sold for more than double the price it bore at Dunstable.

COMMERCE.

The English always have been a commercial people. In the times of the Saxons the dignity of thane was conferred upon the successful merchant; and if the list of English nobles at the present day is examined, a greater number will be found to owe their elevation in society to the industry of peaceful commerce, than to the rapacity and cruelty manifested by the predatory followers of William the Norman, or the subsequent attacks upon neighbouring nations. So distinguished was England for its commerce, that more than 500 years ago, the prophecies and warnings of Holy Writ respecting Tyre were applied to England. The public markets and fairs were then the chief and almost the only opportunity for the sale of the staple commodities of England. Among these were slaves! it must not be concealed that men, women, and children were publicly sold in England, like cattle, till near the year 1400. Wool was largely exported, and the woollen manufacture flourished, being chiefly conducted by the Flemings, many of whom were settled here so early as the reign of Henry I. Lead and tin were considerable articles of export. At the early part of this period, the imports were principally articles of luxury; as wine, silks, spices then much used in food, drugs, linen, and other commodities; but the number of the nobility and others who used these articles was too small to allow of considerable dealings therein. How different from the present day, when the poorest

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families daily consume articles from China and the West Indies, and are dressed in the produce of America, coloured probably by dye-stuff from the East. The general consumption of foreign commodities was then unknown; nearly all was home-raised and home-spun. Wool was the staple commodity of England; it was largely exported in the unwrought state, and woollen stuffs in a variety of forms were the principal manufactures. Large quantities of gold and silver must have been brought in by the way of trade, since the payments to the court of Rome annually drew large sums of money from England, in addition to foreign wars and other circumstances, which frequently arose to take the specie from this country.

During the infancy of commerce, the individual trader was under many disadvantages. Companies were needed for almost every commercial enterprise, not only from the smallness of private capital, but from the necessity of personal union for mutual protection. This led to the establishment of trading companies for almost every branch of foreign commerce, and the settlement of similar bodies here from foreign lands.

The Merchants of the Stilliard were a powerful body in matters relating to trade with Germany. Another term, the Merchants of the Staple, seems to have included all traders to foreign parts, who engaged to submit to certain regulations for trade. Other bodies of traders might be enumerated, and a long list given of commercial treaties, and laws for the encouragement of trade. It was not then known, and indeed is scarcely yet understood, that the best and most effectual encouragement for commerce is to let it alone. One of the most absurd of these laws was enacted in 1363, forbidding any English merchant from dealing in more than one article of trade; it was soon repealed. Another law made every foreign merchant in England answerable for the debts, and even for the crimes of his countrymen; and on many occasions the merchant-strangers were robbed, maltreated, and even murdered. The extent of the exports from England is shown by the large sums sent to Rome in money, that must have been previously brought into this country in exchange for manufactures or produce sent abroad. It also appears from another circumstance, which refers to the existence of bills of exchange as early as 1257. Henry III. owed the pope a considerable sum for supporting the project of making his son Edmund king of Sicily, and the pope was largely indebted to several Italian merchants. By the suggestion of the bishop of Hereford, the pope authorized the Italian merchants to draw bills for large amounts upon the most wealthy of the English ecclesiastics, and by these he settled with the merchants, who remitting the bills to pay their English creditors, the payment was enforced by the royal and papal authority. The sum of 150,000 marks (13s. 4d., each) was thus raised, and the amount considered as a payment from the king to the pope, and all parties were satisfied, excepting the English prelates and abbots. In 1381 a law was passed encouraging the system of bills of exchange.

A very mistaken feeling existed as to the dominion of the narrow seas being essential to the English commerce. Assuredly, so far as superiority of force was requisite to repress piracy, and to protect the trader, this power was needful; but it was not then understood, that the commerce of a country is best promoted by due protection to the foreigner as well as to the native.

The various expeditions against France and other countries, and the frequent equipment of fleets for the protection of the English coast, also interfered with trade. Upon any such occurrence the various ports were required to fit out some vessels for war, and others were hired, or forcibly taken from the owners till the occasion had passed. Henry V. was the first king who had ships of any size that could be called royal property.

The trade in corn varied, low prices and plentiful harvests caused it to be exported, the reverse brought it in large quantities from other lands. In 1463 the country gentlemen complained in the House of Commons, in much the same language as nearly 400 years later, that the merchants who traded with the north of Germany had imported too much corn, and thereby reduced the prices so low as to ruin the English farmer. Both the importation and the exportation frequently were limited to certain fixed quantities.

The treasure lavished under Henry V. and VI., in vain efforts to conquer France, and the distractions caused by the civil wars, did much to injure the trade of England: at the close of the period under consideration, its commerce

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was struggling for existence, and far from meeting with due encouragement and wise support.

The circulating medium was coined money, chiefly silver. Coins of this metal were coined by every monarch, but with frequent variations as to weight and fineness, according to the state of the exchequer. Foreign gold coins, particularly bezants from the East, were generally circulated: the first English gold coin struck after the Conquest, was by Edward III. Large masses of money were accumulated by individuals, as well as by some of the kings. An archbishop of York, about this period, had sums in his coffers equal to two hundred thousand pounds of our present money. In all calculations it must be remembered, that the nominal money pound, even after A. D. 1400, contained more than twice as much silver as at the present day, and the prices of all articles of food were very considerably less, so that an income of five pounds a year was equal to more than seventy-five at the present day. One pound may generally be reckoned equal to about fifteen; and as the artificial wants were fewer, and the opportunities for gratification and expenditure were less common, a small income would go still further. The wages of a day labourer, at a penny or three halfpence a day, were equal to eighteen pence or two shillings now. In the fifteenth century, the price of a cow was 7s.; of an ox, 13s. 4d.; of a sheep, 2s. 5d.; of a hog, 2s.; but it must be remembered, that these animals were small, and scantily fed, compared with the large and regularly fatted cattle of the present day. The raising of artificial grasses and other food for cattle was not practised, nor were vegetables grown, excepting a few cabbages and pot herbs. Fruits were more attended to: after the Norman conquest vineyards were formed in many parts of the southern counties, and wine made from the produce. Plots of land are still pointed out bearing the name, but the vines have disappeared; it is very probable that the wine at best was a harsh and sour article, little or not at all superior to the common cider of the western districts. Pleasure gardens were common, and some care displayed in the arrangement. James I. of Scotland, who was a prisoner at Windsor, about 1414, describes the garden of that castle-palace:—

"Now was there maid fast by the Touris wall
A gardyn faire, and in the corneris set,
One herbere grene, with wandis long and small,
Railit about; and so with treis set,
Was all the place, and hawthorn hegis knet,
That lyf was now walking there fabye
That myght within scarce any wight aspye.

So thick the bewes and the levis grene
Beschadet all thé allyes that there were,
And middis every herbere might be sene
The scharpe grene suete junipere,
Growing so fair, with branches here and there,
That as it semyt to a lyf* without,
The bewis spread the herbere all about."

THE FINE ARTS.

The arts of Painting and Sculpture were in a very rude and imperfect state. The monumental effigies, which belong to the latter class, assist, however, in conveying information as to costume; while the pictures, and especially the illuminations in manuscripts, show considerable proficiency in the art of preparing colours, but very little judgment or science in applying them. The drawing was miserably bad, there was little or no attention to perspective, and the figures, usually representing Scripture subjects, were mostly in the habits of the times in which the painter lived. The low state of these arts appears the less surprising, when it is considered that the artists were paid rather as labourers at certain sums per day, than in proportion to the talent exhibited in their productions. In the year 1800, when the House of Commons was enlarged, the wainscotting being removed, the original walls of the building were exposed to view. They were painted with a variety of figures, the execution was elaborate, and the ornamental work, in many respects, elegant. This building was originally a chapel attached to the palace of Westminster, and dedicated to St. Stephen. On examination in the Record Office, the rolls containing a detailed account of the expenditure upon this chapel were found, when it appeared that the principal works had been executed about the middle of the reign of Edward III., that they were several years in completing, and were the productions of native artists whose names were recorded. The daily pay of the principal designers and limners was one shilling, sometimes only tenpence; the wages of the glaziers and under painters was from sixpence to ninepence. One artist, John Barneby, received two shillings a day part of the time. All materials were usually

* Lyf.—Living person.

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found for the workman, and charged in addition. The "images" and "angels" carved in stone were paid for by "task-work," the stone being sometimes included in the price, and sometimes, apparently for the most important statues, the stones were purchased and supplied to the sculptor. The price for "making three kings, of the king's stone, by task-work, was 2l. 13s. 4d. for each image. Twenty angels, by task-work, were made at 6s. 8d. each image." How different from the customs and expenditure of the present day! In the same account, cotton is charged at 10d. per lb.

In proportion as commerce and reciprocal intercourse brought the different countries of Europe together, they successively became more polished in their habits and manners. The Italians and Flemings were the first to distinguish themselves in painting, architecture, and other ornamental arts, as well as in mercantile pursuits. Ghent and Bruges, Venice and Genoa, were splendid cities, with noble buildings, while the dwellings in England and France, and the state of the fine arts there, were as above described. This rude style of building and living prevailed till the close of the fifteenth century.

ECCLESIASTICAL STRUCTURES.

CONCLUSION.

The monastic buildings have been described in the Visitor for January, 1837; and have been noticed in the remarks on buildings. The most splendid and considerable of the cathedrals, and other ecclesiastical structures now existing, were also erected in the period under consideration, and show the progress made in these respects; but the public services of religion in those buildings were much further from the simple truths of the gospel, than the services in the rude churches of the Saxons. The darkest hours of the night, however, are those which immediately precede the dawn; and the dawning of the day of the Reformation had already begun to appear. The account of Wickliff and others, already given, fully show this; and even amidst the darkness of the cloister, there were some gleams of light. The following extract from the writings of Walter Hilton, a Carthusian monk, who lived in the latter part of the reign of Henry VI., seems not unappropriate for the conclusion of the history of an eventful period like that just closed, in which all the busy passions and ambitious courses of men were displayed with the broadest alternations of light and shade, not subdued or kept under by the artificial rules of society, as in later days.

He says, "Also to think upon the miseries, mischiefs, and perils, corporal and spiritual, that happen in this life, and after that to think of the joys of heaven, as how great happiness is there, and what wonderful joy and delight; for there is neither sin nor sorrow, nor passion nor pain, hunger nor thirst, aches nor sickness, doubt nor fear, shame nor blame, nor want of power nor strength, nor lack of light, nor coldness in love; but there is most excellent beauty, clearness, strength, health, everlasting delights, perfect wisdom, love, peace, honour, security, rest, joy, and bliss in abundance, without ever having any end. The consideration of these points ought to cause the more fervently to covet and desire those everlasting joys and rest of that same most blessed life. Many men are covetous of worldly goods, honours, and earthly riches, and think both in dreaming and waking, how and by what means they might come thereto; and then they forget all care of their soul's good, and all thoughts of the pains of hell, or of the joys of heaven. Surely these men are not wise: they are like to children that run after butterflies; and because they look not to their feet, they sometimes easily fall down and break their legs. What is all the pomp, honours, riches, and jollity of this world but a butterfly? Surely it is no more, yea, it is much less: Therefore, I pray thee, be covetous of the joys of heaven, and thou shalt have honour and riches that shall last for ever."

And although Hilton wrote not with that clearness and simplicity which the Reformers shortly after were enabled to manifest, yet he failed not to point out the only remedy for sin and sorrow, Christ Jesus, the only source of light and life. He says, "When I feel my soul suddenly touched with the light of thy grace, healed and cured from all the filth of sin, and comforted in love and in light with spiritual strength and gladness unspeakable, then can I say with strong, loving, and spiritual might to thee: 'Thy name, O Jesus, is to me oil poured forth.' For, by the effect of thy gracious visitation, I feel well the true exposition of

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thy name, that thou art JESUS, health; for only thy gracious presence healeth me from sorrow and from sin."

INFIDELITY OVERCOME.

IN the year 1826, a gentleman named Godman, who greatly distinguished himself in his profession, was called to fill the chair of anatomy, in Rutger's Medical College, in the city of New York. This situation, like others in which he had been placed, he sustained with great popularity. Never did he appear in public but there gathered around him an admiring audience, who hung with delight on his lips.

His state before God, however, presented, unhappily, a striking and affecting contrast to his remarkable acceptance among men. He had formed his philosophical and religious opinions after the model of the French naturalists of the last century, the most distinguished of whom were deists and atheists. Such is man in his natural, his fallen condition, that even while surrounded by the most magnificent displays of Divine power and wisdom, with his eyes directed to those very objects, and his attention arrested by those very laws which proclaim the existence and the presence of an Almighty power, he overlooks the evidences they furnish of the existence and perfections of a Deity; and this often under the specious but delusive pretext of casting off the shackles of prejudice and superstition, and of giving the reins to free, enlightened, and philosophical inquiry. Such was the case with Dr. Godman; for while assisted by such lights as these, and guided alone in his investigations by perverted reason, he became, as he tells us, an established infidel, rejecting revelation, and casting all the evidences of an existing God beneath his feet.

It was not till the winter of 1827, while engaged in his course of lectures in New York, that he was arrested in his career, and brought to an experimental knowledge of the truth. At this time an incident occurred which led him to a candid perusal of the Gospels. It was a visit to a death-bed; the death-bed of a Christian; the death-bed of a student of medicine. There he saw what reason could not explain, nor philosophy fathom. He opened his Bible, and the secret was unfolded. From this time he became a devoted student of the Scriptures. How far they were made the efficient cause of his conversion to Christianity will best appear from his own eloquent pen.

To a medical friend, Dr. Judson, of Washington city, a surgeon in the navy of the United States, who was at that time in the last stage of consumption, he wrote as follows:—

"*Germantown, Dec.* 25, 1828.

"In relation to dying, my dear friend, you talk like a sick man, and just as I used to do when very despondent; death is a debt we all owe, and must eventually ensue from a mere wearing out of the machine, if not from disease. The time when, makes no difference in the act of dying to the individual; for after all, it terminates in corporeal insensibility, let the preceding anguish be never so severe. Nature certainly has a strong abhorrence to this cessation of corporeal action, and all animals have a dread of death who are conscious of its approach. A part of our dread of death is purely physical, and is avoidable only by a philosophical conviction of its necessity; but the greater part of our dread, and the terrors with which the avenues to the grave are surrounded, are from another and a more potent source. 'Tis conscience that makes cowards of us all,' and forces us by our terrors to confess that we dread something beyond physical dissolution, and that we are terrified, not at merely ceasing to breathe; but that we have not lived as we ought to have done, have not effected the good that was within the compass of our abilities, but neglected to exercise the talents we possessed to the greatest advantage. The only remedy for this fear of death is to be sought by approaching the Author of all things in the way prescribed by himself, and not according to our own foolish imaginations. Humiliation of pride, denial of self, subjection of evil tempers and dispositions, and an entire submission to his will for support and direction, are the best preparatives for such an approach. A perusal of the Gospels, in a spirit of real inquiry after a direction how to act, will certainly teach the way. In these Gospels, the Saviour himself has preached his own doctrines, and he who runs may read. He has prescribed the course; he shows how the approval and mercy of God may be won; he shows how awfully corrupt is man's

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nature, and how deadly his pride and stubbornness of heart, which cause him to try every subterfuge to avoid the humiliating confession of his own weakness, ignorance, and folly. But the same blessed hand has stripped death of all the terrors which brooded around the grave, and converted the gloomy receptacle of our mortal remains into the portal of life and light. Oh! let me die the death of the righteous, let my last end and future state be like his.

"This is all I know on the subject. I am no theologian, and have as great an aversion to priestcraft as one can entertain. I was once an infidel, as I told you in the West Indies. I became a Christian from conviction, produced by the candid inquiry recommended to you. I know of no other way in which death can be stripped of its terrors; certainly none better can be wished. Philosophy is a fool, and pride a madman. Many persons die with what is called *manly firmness;* that is, having acted a part all their lives, according to their prideful creed, they must die *game*. They put on as smooth a face as they can, to impose on the spectators and die *firmly*. But this is all deception; the true state of their minds at the very time, nine times out of ten, is worse than the most horrible imaginings even of hell itself. Some who have led lives adapted to sear their conscience and petrify all the moral sensibilities, die with a kind of indifference similar to that with which a hardened convict submits to a new infliction of disgraceful punishment. But the man who dies as a man ought to die, is the humble-minded, believing Christian; one who has tasted and enjoyed all the blessings of creation, who has had an enlightened view of the wisdom and glory of his Creator; who has felt the vanity of mere worldly pursuits and motives, and been permitted to know the mercies of a blessed Redeemer as he approaches the narrow house appointed for all the living.

"Physical death may cause his senses to shrink and fail at the trial; but his mind, sustained by the Rock of Ages, is serene and unwavering. He relies not on his own righteousness, for that would be vain; but the arms of mercy are beneath him, the ministering spirits of the Omnipotent are around him. He does not die manfully, but he rests in Jesus; he blesses his friends, he casts his hope on One all-powerful to sustain and mighty to save, then sleeps in peace. He is dead—but liveth; for He who is the resurrection and the life has declared, 'He that believeth on me, though he were dead, yet shall he live; and whosoever liveth and believeth in me shall never die.'"

Dr. Judson, to whom this letter was addressed, though religiously instructed when young, having a pious minister for his father, and another for his elder brother, the distinguished and devoted missionary to Burmah, had long since freed himself from what he called the prejudices of education, and the shackles of priestcraft, and was ranging the fields of infidelity. He had acquired wealth and reputation: was an estimable man in all the domestic relations of life, and a highly respected member of his profession; but the self-denying doctrines of the Saviour were too humbling to his proud spirit, and he could not submit to their influence. At the time he received Dr. Godman's letter, however, he was gloomy and despondent; looking forward with fearful forebodings to the period of his dissolution, which seemed not far distant. He had no confidence but that of the sceptic, no hope but that of ceasing to be. Aware of the fatal nature of the disease under which he had lingered for years, he had long been arming himself to meet the king of terrors with composure, that he might die like a philosopher, "with manly firmness;" but as he drew nearer to the grave, the clouds and darkness thickened around him, and he began to fear that there might be something beyond this narrow prison. He had hitherto refused all religious intercourse, but now his infidelity began to give way, and he inquired with solicitude, "Is there such a thing as the new birth? and if so, in what does it consist?" He was directed to the Gospels for the answer. He at length consented to make the investigation recommended by Dr. Godman. He took up the New Testament, and read it in the spirit of candid inquiry. A conviction of the truth of its doctrines fastened upon him. He now solicited the advice and prayers of a pious minister. Yet he could not consent to relinquish the sentiments which he had so long cherished, without the clearest proof, and he disputed every inch of ground with great acuteness and ability: but the truth was exhibited by the venerable divine with such force and sim-

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plicity, that it overcame every argument he could produce, and he saw clearly the folly of his sceptical opinions. The clouds were dissipated, light broke in upon his mind, and he was enabled to take hold of the promises. The remaining days of his life were devoted to fervent prayer and the constant study of the Scriptures, which filled his soul with divine composure, and enabled him to rely with undoubting confidence on the infinite merits of his Redeemer, and with his last breath to cry, "Peace, peace." If he did not die with "manly firmness," he "rested in Jesus."

To a friend, who transmitted an account of the last moments of Dr. Judson, Dr. Godman replied:—

"I feel very grateful for your attention in sending me an account of dear Judson's last moments. After all his doubts, difficulties, and mental conflicts, to know that the Father of mercies was pleased to open his eyes to the truth, and shed abroad in his heart the love and salvation offered through the Redeemer, is to me a source of the purest gratification, and a cause of the most sincere rejoicing. The bare possibility of my having been even slightly instrumental in effecting the blessed change of mind experienced, excites in me emotions of gratitude to the Source of all good which words cannot express."

In reference to the last moments of Dr. Godman, on the 17th of April, 1830, at the early age of thirty-two, a friend writes:—

"They were such as have robbed me of all terror of death, and will afford me lasting comfort through life. The same self-composure and entire resignation, which were so remarkable through his whole sickness, supported him to the end. Oh, it was not death—it was a release from mortal misery to everlasting happiness. Such calmness when he prayed for us all, such a heavenly composure, even till the breath left him—you would have thought he was going only a short journey. During the day his sufferings had been almost beyond enduring. Frequently did he pray that the Lord would give him patience to endure all till the end, knowing that it could not be many hours; and truly his prayers were heard. 'Lord Jesus, receive my soul,' were the last words he uttered, and his countenance appeared as if he had a foretaste of heaven even before his spirit left this world."

How delightful are these triumphs of Divine truth over fatal error! They follow in the rear of others over which there has been joy both in heaven and on earth; and, at the same time, they are happily the precursors of multitudes more. Infidelity offers no hope even in health and prosperity, but in the day of affliction and adversity, it consigns its wilfully-deluded votary to abject despair. Christianity, on the other hand, increases the joy of temporal possessions; and more than compensates for their total loss. The season of the believer's deepest emergency, is that of its strongest consolations.

How anxious should we be then, that faith, its essential and vital principle, should dwell and work mightily in our hearts! Our welfare in time and eternity is dependent on its possession; "He that believeth shall be saved," Mark xvi. 16, and he alone. For the unbeliever, whether in the cloak of nominal religion, or rejecting even this thin disguise, there is no redemption; "He that believeth not shall be damned," Mark xvi. 16. Let this truth, then, awaken and increase solicitude for ourselves; without faith we are lost: and let it enkindle and sustain our zeal in reference to others; for without faith there is no salvation.

THE PERAMBULATOR.

EXCURSION TO FRANCE.

PART V.

The Baths of Paris—Men leaping from the Bridge—The Napoleon Pillar—The Café des Milles Colonnes; Café Hardi; Café Zoppi; Café Tortoni; Café des Aveugles; Café des Chinoises—Gaming Houses in the Palais Royal—Fountains of Paris—Versailles Palace—Paintings—Fête Dieu—Charles the Tenth—Fondness of the French for processions—Jardin Royal des Plantes—Charitable Institutions—Porcelain—Printed paper for rooms—Tapestry—Departure from Paris—Arrival in London.

The baths of Paris are very numerous, and those in the house-boats on the Seine are beautiful. When lighted up at night, they have quite a magical appearance; for the edges of the boats are ornamented with choice trees, plants, and flowers; fountains playing, and birds hanging in cages. In some of the house-boats there are artificial rocks, and pavilions upon them. In others there are promenades beautified with

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roses, myrtles, and orange trees; while, in all, conveniences of every kind abound, for bathing, taking refreshment, and reading the newspapers. In the swimming-schools I saw at least fifty young men in the water at once, most of them very expert both in swimming and diving.

Walking one day with an English gentleman on the banks of the Seine, we observed two men standing on the parapet of a bridge, at some fifty yards distance; they were stripped for bathing, having nothing on but the dress usually worn by French bathers, round the loins.

"Surely," said my companion, "those fellows yonder never mean to leap from the bridge into the water!"

"Why," replied I, jokingly, "so many strange things have I seen in Paris, that I should scarcely feel much surprised if the bridge should leap after them."

Scarcely had I spoken, when one of the men sprung into the air, and then fell straight as a descending arrow perpendicularly into the water. In a few seconds the other followed his example.

What made this circumstance the more remarkable was, that no persons were assembled to witness and applaud the feat; it seemed a common-place, every-day sort of an affair with them. After this I witnessed some very superior swimming in the river: in this exercise the Parisians seem far before the inhabitants of London.

Every stranger visits the Napoleon Pillar, in the Place Vendome. It is a magnificent work of art, on the model of Trajan's Pillar, at Rome. The square in which it stands is very beautiful, the buildings on three sides of it are ornamented with Corinthian columns, while below is a covered gallery, with a succession of arcades.

Napoleon's pillar is one hundred and thirty feet high, and entirely covered with brass, cast from the artillery taken by Buonaparte from the Austrians. From the top to the bottom it is covered with bas reliefs thrown into a spiral form, representing the principal events of the campaign of 1805.

At the present time it has a figure of Napoleon Buonaparte at the top of it, but that was not the case when I ascended it. There is an inside spiral staircase by which visitors reach the summit; hundreds of little memorials are scratched upon the upper part of the pillar, by those who have gazed on Paris from its stately elevation.

Englishmen are proverbial for their inclination to inscribe their illustrious names, or august initials, in every remarkable place they visit. The summit of Napoleon's Pillar bore ample testimony to the existence of this propensity.

However blameable it may be so to disfigure works of art, I will here plead guilty to the fact, of having inscribed, with the point of my penknife, on the pillar of Napoleon, the names of many who held a place in my affections. A sudden thought of the perishable nature of what we call "eternal brass," came across my mind, and induced me to make the following addition. These names are inscribed by

A stranger from across the sea,
His lowly name it matters not:
May they in heaven remembered be,
When this proud column is forgot.

The Café des Mille Colonnes is one of the "lions" of Paris. It is so unlike any thing we see in England, that the stra nger who visits it looks around him with wonder and admiration. The number of its beautiful gilt columns must be great, but reflected as they are, over and over again, by the large mirrors which adorn the place, they appear almost innumerable. While sipping a glass of sherbet, I had an opportunity of surveying the costly café. To be at ease when surrounded with such splendid decorations was, to me, impossible: all was gorgeous and great, novel and exciting. On an elevated throne, which of itself cost more than a thousand pounds, presided one who had the air of a princess, her face was surpassingly fair, her manners graceful, and her dress splendid to an extreme. Every visitor on entering and quitting the room where she sat, made her a respectful bow, while some familiarly joined her in conversation.

Most of the principal cafés of Paris have a something peculiar to themselves: thus the Café Hardi is famous for its breakfasts; the Café Zoppi for the literary characters that assemble there; the Café Tortoni for its ices; the Café des Aveugles for its orchestra of blind musicians; and the Café des Chinoises, for the Chinese dresses worn by its attendants. I peeped into as many of the remarkable cafés and restaurateurs as my limited time would allow me to see.

There is a great difference between the eating-houses of London and the

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restaurateurs of Paris with regard to attendance. In London one waiter usually supplies the wants of a room full of company, so that at times you may call, ring, and wait, for ten minutes together, without obtaining what you wish. In Paris there is usually an attendant to every two or three tables, so that your wants are promptly supplied, and your wishes often anticipated.

An English gentleman stopping at the Hotel de Montauban, who had accompanied me to several public places, expressed a strong desire to steal a passing glance at one of those dens of infamy, the notorious gaming-houses of the Palais Royal, in regard to which he seemed to entertain as strong an abhorrence as I did. It seemed a good opportunity for me to see what I could not witness alone with safety, for some of those places cannot be entered without much personal danger. The gaming-house into which the chasseur had led me at Pontoise, was of a low order, where small sums were staked, but many of those of the Palais Royal were of an opposite kind; hundreds and thousands of pounds were daily lost and won at them. I had heard much of the crime, ruin, despair, and suicide, brought about in Paris by gaming; and I certainly felt, when with my companion I entered one of the higher gaming-houses of the Palais Royal, as if the very air of the place were polluted.

We ascended a broad staircase, at the top of which sat in waiting a servant in handsome livery. To his care the visitors of the place consigned their hats, swords, sticks, and umbrellas, as the case required. We passed through several rooms, where different parties were engaged at different games, and then entered a large apartment wherein the game of Rouge et Noir was carried on.

About eighteen or twenty people were seated at a large green baize-covered table. The banker occupied a seat somewhat more elevated than the rest; and *rateaux*, or wooden rakes, lay beside the different players. I shall not attempt to describe the game, for I did not understand it; but the amount of money changing hands was great. There were square piles of six-livre pieces, and napoleons, and louis d'or, and double louis d'or, and rolls of bank notes on different parts of the table; but the banker's treasury was the best supplied. While we were seated as spectators, one of the players quitted the table "cleaned out," having lost every thing he had staked. No doubt he left the place with bitter feelings, if not with shame and remorse. Glad was I to hasten him from this house of infamy. This was the first and last time I ever entered such a house.

"What characters have been blasted! what sums have been lost! what peace has been destroyed! what ruin has been wrought! what crimes have been committed! what misery has been spread! what despair has been created! and what blood has been shed by gaming!"

How necessary to avoid the beginnings of sin! No wonder that the boy who tosses up for a halfpenny should, when a man, stake his gold.

> Push a stone from the hill, and how soon it will go,
> From the top where it stood, to the valley below;
> Thus the gamester goes onward, nor can he forbear,
> To folly, guilt, ruin, remorse, and despair.

In London we have scarcely any fountains, in Paris they are numerous; not fewer than threescore of these elegant decorations are to be seen in different parts of the city. In the Fontaine de la Rue de Vaugirard, the stream of water is so small that it issues from the beak of a sculptured swan. In the Fontaine des Innocens, the water flows from the mouths of four lions. In the Fontaine de la Place de l'Hospice Militaire du Gros Caillou, a figure of Hygeia offers water to a war-spent soldier; and in the Fontaine St. Eustache, the water falls from a vase into a shell, and from thence into a cistern, while the head of a Tantalus, with a wreath of flowers round it, with opened mouth, fixes his eyes on the fallen water which he cannot reach.

But the fountains of Paris by no means equal those of Versailles. This latter city is about twelve miles from the former. I got into an odd-looking vehicle at the Quay of the Tuileries with several Frenchmen, and could not but observe how careful the conductor was not to let me see what money was paid him for the fare, lest he should get no more from me than he obtained from the rest.

At Versailles, a Frenchman offered himself to me as a guide. He would attend Monsieur to the great Palace, and show him the grounds and the fountains, and the orangery, and every thing, and he would only charge Monsieur four francs. I turned a deaf ear to all this; but I had not proceeded far before he

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again joined me, lowering the price of his attendance to three francs. Still obdurate, I declined all overtures, until, at last, he offered himself for two francs, which being, as I before understood, a sufficient recompence, his proffer was accepted.

Not knowing how to introduce myself, or in fact how to find my way through the many halls and staircases of the palace, a guide appeared to me to be absolutely indispensable. Judge, then, my surprise, when the Frenchman, having walked with me through the grounds, pointed to the palace, and informed me that he could accompany Monsieur no further. In vain I expostulated, requested, and threatened; no further would he go: so paying him his two francs, I entered the palace alone.

At the top of a grand staircase, I found a soldier on duty; with him I held a parley in my very best French; produced my passport, and took a seat in an antichamber, while he delivered in my name. I was soon summoned to attend him, when we passed through a part of the palace together. After which he left me to the civilities of another soldier. Neither of them refused what was offered to them, though the palace is considered a gratuitous exhibition.

The paintings of the palace were costly, nor were the architecture and sculpture a whit less entitled to attention. Such a profusion of exquisitely sculptured figures I never before beheld.

The orangery consisted of orange-trees in large frames or tubs, moveable about at pleasure, so that the orangery might be made to assume different forms. The fountains were not playing, but their number, and the exquisite beauty of the sculpture which adorned them, astonished me. In one of them seventy-four enormous frogs, when the fountains played, poured out water from their mouths.

Versailles with its arcades, halls, galleries, saloons, and cupolas, gildings, mirrors, vases, and fountains, appeared to me to be by far the most splendid and costly palace that my eyes had ever gazed on; but how many hearths and homes had been deprived of comfort to pamper the pride and vanity of Louis Quatorze!

It is a goodly sight to gaze on the works of genius, and the magnificent erections of greatness and power; but if the widow and the orphan cry out against them; if the sacking of cities, and the oppression of the poor, be necessary for their production, then are they rather monuments of selfish ambition than of national glory. In these works thousands gained bread for themselves and their families, but the pursuit of war by this monarch was alike destructive of his own land and those he sought to conquer.

During my stay at Paris, the Fête Dieu took place; and I could have imagined that a million of people were congregated together. The profusion of tapestry from the manufacture Royal des Gobelins, displayed on the occasion, in front of the buildings, was astonishing. The king of France, with his ecclesiastical dignitaries, ministers, and nobles, walked in procession. I pushed among the throng, so as to get tolerably near to Charles the Tenth, who, though the day was excessively hot, walked among his subjects with his head uncovered.

The French are childishly fond of spectacles and processions. Never did I see a group of children more absorbed in building houses with bits of stick and pieces of platter, than were the lower classes of men and women in arraying the front parts of their houses with flowers and small temples, coloured cloth, linen, canvas, or paper, and in dressing up figures to personate the Virgin Mary, and pieces of wood, barrels, and other things to make a show. Truly might it be said of them, "Men are but children fully grown."

One procession that I saw consisted of about thirty boys and as many girls, the latter clad in white, attended with priests, and preceded by military officers, a company of gendarmerie and drums. The boys and girls chaunted alternately a solemn strain. Such processions are very arresting to a stranger; their novelty and their solemnity equally attract attention; but the rattling drum, the iron heel of the soldiers on the stone pavement, and the word of command harshly called aloud, appear out of all keeping with the scene.

The "Jardin Royal des Plantes," was to me a place full of interest, the botanic garden, the menagerie, and the museum, being well supplied with all that could make them objects of curiosity to a stranger The Zoological Gardens of London are very attractive, but the exotics of the Jardin des Plantes impart a peculiar character to the place. I gazed with pleasure on the palm, the

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bread-fruit, the banana, the cocoa-nut, and the bamboo, and fancied myself in the sunny lands where these trees so abundantly flourish.

The charitable institutions and public schools of Paris are many; but a glance at a few of them was all in which I could indulge.

The porcelain of the city appeared fine, the printed paper for ornamenting rooms very superior to any thing we see in England, and the tapestry unrivalled.

He who would observe the character and manners of the lower order of Parisians free from restraint, must peep into the "Jardin des Marroniers," or Chestnut-tree Garden, and the guinguettes in the suburbs of the city. Holiday clothes, holiday faces, and holiday hearts, are here almost innumerably grouped together. The light-hearted throng have no more apparent care for the future hour, than the painted butterfly fluttering from parterre to parterre in a garden of flowers.

Though years have elapsed since these scenes were spread before me, the mere reading over the remarks I then noted down, occasion them again to start forward with all the recency of yesterday.

Paris is even now before me with its cafés, restaurateurs, and splendid hotels, palaces, squares, bridges, boulevards, and fountains, cemeteries, public buildings, and columns, paintings, statues, spectacles, processions, and tapestry.

Here is Notre Dame, there the Louvre, and yonder the Place Vendome. At one minute I enter a grand hotel, its vermilion walls, painted curtains, gold fringe and tassels, reflected in large mirrors with burnished frames. At another, I stroll along the boulevards, under the shadowy elms, and among the motley groups joyously assembled together.

What valuable gifts are those of the memory and imagination! how vividly they bring before us the past, enabling us to live again through scenes which have afforded us pleasure! The extended prospects, the fortified towns, and the chateaux of France, often rise in my remembrance, with the uncouth diligences and fish carts that a traveller meets as he journeys on; the vineyards spread right and left; and the crucifixes by the way-side, the wooden crosses in the burial-grounds, the blue-frocked peasants, and the females with their high caps and streaming lappets. I could sketch a hundred vignettes that memory retains, of groups dancing in the fields, of shepherds tending their flocks, of well-mounted gendarmerie on the public roads, of young women sitting in bow-windows making lace, and of ponds filled with green-bodied, loud-croaking frogs.

A thoughtful perambulator in France of necessity observes many things which propriety requires him to withhold; and even what he describes is only a meagre allusion to scenes and circumstances by far too numerous and variable to be noted down, unless his object at the time be to give, afterwards, a "local habitation and a name" to what passes before him.

On looking over what I have written, it seems like a burlesque upon my French excursion, rather than a description of what I really saw and felt. When the heart is interested, it can hardly brook the slow and common-place process of writing down its emotions, and when they are passed by, they can seldom be recalled. There is a life and freshness in our sensations, when placed in pleasureable or interesting circumstances, compared with which any after-recurrence to them is insipid and lifeless.

I left Paris as a perambulator, having a walk of more than a hundred and seventy miles before me; passing through St. Denis, Moiselle, Beaumont, on the road to Marseilles and Granvilliers, and thence through Abbeville, Nouvion, and Montreal, to Boulogne and Calais.

In this ramble I found much that was interesting and pleasureable. Being free from restraint, I wandered as it pleased me, to the right and to the left; gazed on the crucifix by the way-side; mused over the floweret in my path; "muttered my wayward fancies," and occasionally burst into an ejaculation of grateful thanksgiving.

> "In all the changing scenes of life,
> In trouble and in joy,
> The praises of my God shall still
> My heart and tongue employ."

Many who reckon their golden napoleons in going to Paris, count over their silver francs in returning thence. A Parisian trip is usually a costly affair, and yet it may be made at a small expense. I knew a pedestrian who once accomplished it, residing a week at the French capital, without spending more than five pounds: this sum paid his passage and all his expenses. I should be sorry to undertake the trip with only double this sum in my purse; but the

instance I refer to, which took place since my excursion, shows what may be achieved.

Crossing over from Calais, I reached Dover, and thence walked to London; thus finishing an excursion of between six and seven hundred miles, four hundred and sixty of which I had walked.

On summing up the result of my French excursion, my gratification had been great, and the few difficulties I had encountered were such as a more prudent perambulator might easily avoid.

My knowledge had been extended, myaffection for my native land increased, my thirst for adventure, and love of lonely musing in the crowded city and the solitary place, had been indulged. I had been mercifully preserved by land and by water; and I entered London with a heart grateful to the Giver of all good, for his indulgent kindness, his watchful care, and protecting providence. Sorry should I be to blot from the page of the past the remembrance of my hasty peep at Paris; and still more so to forget the goodness of God, that accompanied me in my health of body and peace of mind, my basket and my store, my "going out and my coming in."

WATCH STATISTICS.

Mr. Dent, (Arnold and Dent,) in his Illustrations of a Lecture on the Construction of Watches and Chronometers, lately given by him at the Royal Institution, laid before the meeting the dissection of a detached lever watch, (compensation balance;) every part was separated and displayed, but grouped in one of six larger divisions to which it belonged.

Each part had been previously examined, and its distinct constituent pieces counted by the lecturer; the surprising result of this enumeration was exhibited in a table, of which we lay a copy before our readers.

In addition will be found the number of kinds of artificers concerned in the operations necessary for the construction of a good watch. When to these are added, the amount of previous operations, which the materials constituting each piece must undergo, *before* it comes into the hands of the watch artificer, a glimpse may be obtained of the extensive and numerous changes of form and value which "raw material" receives in its progress, from the mine, to so refined a manufacture as a finished watch.

Number of Parts.		Number of Pieces.	Trades employed.
1.	Pillars	4	1
2.	Frame	4	1
3.	Cock and Potence	2	1
4.	Barrel and Arbor	3	1
5.	Going Fuzee	14	2
6.	Wheels	4	1
7.	Pinions	4	2
8.	Stop Stud	1	1
9.	Stop and Spring	3	1
10.	Click and Ratchet	3	1
11.	Motion	16	2
12.	Jewels, (5 holes)	28	2
13.	Cap	3	2
14.	Dial	5	3
15.	Index	1	1
16.	Escapement	13	3
17.	Compensation Balance	9	1
18.	Case	3	1
19.	Pendant	2	1
20.	Case-Joint	6	1
21.	Case-Spring, etc.	4	2
22.	Main-Spring	1	2
23.	Chain	826	3
24.	Hands	3	1
25.	Glass	1	1
	Total of Pieces	963	

Engine Turner	1
Engraver	1
Gilder	1
Examiner	1
Total of kinds of Artificers employed	42

GOD'S TIME IS THE BEST.

Notables in my life.—My being raised to my present situation, (the representation of the county of York,) just before I became acquainted with the truth; and one year and a half before I in any degree experienced its power. This, humanly speaking, would not have taken place afterwards.—*Wilberforce's Journal, Sept.* 4, 1796.

PIETY.

To advance in piety is our principal business, because it demands from us greater efforts than any other work, on account of our natural corruption, the malignity of our enemies, and the short space of our lives.—*Dumont.*

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ON THE TEETH OF MAMMALIA.

The growth, the structure, and the express adaptation of the forms of the teeth of mammalia to the uses for which they are designed, present some of the most interesting points of investigation, to the scientific naturalist. He discovers in the harmony which exists between these instruments and the digestive organs, the limbs, the muscular system, and the general contour of the body, the most irrefragable proofs of a unity of design, and construction; inasmuch as he sees means adapted to a specific purpose, and in the arrangement of the whole machine, so many parts, like wheels on wheels, bearing upon each other, each depending upon each, mutually influencing and influenced, that he is at last constrained to pause in wonder and delight.

No apology is needed for introducing a subject so full of interest and information to the notice of our readers; but rather for the brief and superficial way in which we must necessarily treat it.

What are the teeth? They are bodies composed of a calcareous deposit, called ivory, and another called enamel; which latter is disposed either in the form of an envelope, or in layers through their substance. They consist of a body, and roots or fangs; and are situated in corresponding depressions or *alveoli*, along the edge of the upper and under jaw. When perfectly developed, the body or crown is exposed; but before this perfection is attained, the tooth has to emerge by a kind of growth through the gum which previously covered it as it lay concealed in its *alveolar cavity*. And here a question naturally arises; How do teeth grow? and how are they formed at the commencement? The difficulty of instituting such experiments as will clear up no little which is yet obscure, respecting the physiology of dentition, must be at once apparent; it would appear, however, that the first origin of a tooth is by secretion from an apparatus of great delicacy to which most anatomists have given the name of *dental capsule*. This capsule consists of a central bulbous part, for the secretion of the ivory, and a membranous expansion for the production of the enamel.

This bulbous pulp is composed entirely of nerves and blood-vessels ramifying to an extreme degree of minuteness, and in form corresponds to the tooth which is in the act of being, as it were, modelled, or moulded upon it. The crown, or upper portion of the tooth, is consequently that which is first formed, and over this, following its irregularities, is spread the external membrane for the production of its enamel surface: this membrane is pierced at its upper part, by the tooth as it emerges from its capsule.

In the teeth of ruminants and other mammalia, where ribbands of enamel intersect the body of the tooth, there is an internal membrane for the production of this enamel enveloping the bulb, which becomes obliterated, as soon as the tooth is formed.

When the crown of the tooth is completed, the secretion of the fangs takes place; their number usually corresponds to the number of the eminences on its crown. The production of the roots or fangs is due to the same agent which secreted the crown, and of which they may be said to be merely alveolar prolongations. While the roots are thus in progress, the tooth rises in proportion, till at length it passes through the gum, and attains its perfect development.

Such is an outline of the process of the first dentition; a process not without its danger; for as F. Cuvier observes, "At this stage of the formation of the teeth, (that is, on their emerging from the sockets, and through the gum,) the vitality of their capsule is carried to a very high degree, the blood rushes to that part with great force; the irritability becomes there extreme, and hence truly arise the sad results of dentition in young animals."

The first series of teeth, commonly termed the milk-teeth, are not permanent; after a few years they are pushed out by a second series formed in *alveoli*, or sockets beneath them; or, as in the instance of the elephant, behind them; and in our species it often happens that the last permanent molars, or wisdom teeth, do not pierce the gum till after a considerable delay.

It is doubtful, however, whether the incisor teeth of many rodent animals (as the porcupine) are ever exchanged for others; and as it regards their molar teeth, where there are only three on each side, the dentition, according to Cuvier, is only single. In the hare tribe, these teeth fall out a few days after birth, and are replaced by others; and at the same time, behind the incisors, spring others of a rudimentary character.

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We have thus touched, in a general and slight manner, upon the structure and the growth of teeth; points upon which much remains to be accomplished, towards a full and satisfactory solution of several difficulties. Without attempting to enter into these abstruse physiological minutiæ, we shall proceed in our design.

It must be evident to any one who reflects, that as animals feed upon various kinds of food, there must necessarily occur among them a great dissimilarity in the structure and figure of the teeth, which are the agents for dividing or comminuting the food as a first process in the great work of digestion. But nature goes beyond this: there is not only a wide difference between the teeth of the carnivorous animal, and that which feeds solely upon vegetable aliment; but the teeth both of carnivorous and graminivorous animals, differ among themselves. Thus, though the teeth of the tiger and glutton alike indicate carnivorous propensities, and so far agree, still they differ in many minor characteristics: and though the teeth of the ox and the horse alike exhibit the nature of their food, they are by no means similar. Thus has every subordinate group, every genus, its characteristic dentition, by an attention to which the naturalist gains an important clue to the relationship or affinities, binding, with more or less closeness, the multiform groups which enter into the class mammalia.

If our limits prevent our following out the subject in all its bearings, we may at least give such a sketch as will convey a correct general outline. In doing this, we shall have to contemplate the teeth not only as instruments for subdividing aliment, preparatory to its digestion, but as agents by which that food is obtained, and as weapons of destruction.

In pursuance of our plan, then, we shall consider the mammalia according to their food, as *omnivorous*, *carnivorous*, and *herbivorous*, and endeavour to show how, in each of these sections, there are what we may term primary and subordinate differences in the teeth, according to the precise nature of the food, be it animal or vegetable, and the general economy of the group.

At the head of the omnivorous mammalia, stands our own species. Man is not restricted to one unvarying food; nay, his health and strength require a certain degree of diversity. Neither would it appear that raw or uncooked aliment is his natural diet. His teeth have not the strength, nor his jaws the peculiar motion calculated for bruising grain; fruits and succulent vegetables are not universally in his power; and moreover yield to his system a very inadequate supply of nutriment; neither are his teeth formed for rending flesh, nor are the muscles of his jaws of sufficient vigour. Man, indeed, is essentially adapted for artificial life; artificial as it regards the brute creation, but not himself. He may not be civilized, he may not dwell in cities, nor under organized governments, but wherever he is, and however he exists, whether he be a red hunter of deer, in an American forest, or a black native of central Africa, chasing the antelope with his assagai and his poisoned arrows, he is in one sense an artificial being. He does not willingly devour the quarry raw; the application of fire is essential, ere the diet be either agreeable or wholesome. The universality of this rule shows, contrary to all that some philosophers imagine, that man is innately an artificial being; that his Maker has so ordained it that however savage, however wild he may be, he shall not sink the man in the brute.

It may seem superfluous to say much on his dentition, yet we cannot pass it over: besides, there are many who are ignorant of it.

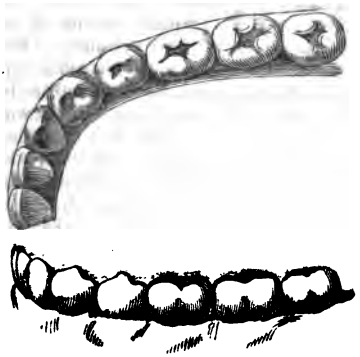
Man in his mature condition, is furnished with thirty-two teeth: sixteen above; and sixteen below. Each jaw contains, on either side, two incisors, one canine, and five grinders, or *molars*.

The incisors are compressed and simple in form, with a plain cutting edge, not very sharp, their outer aspect being convex, the inner somewhat concave.

The canine is stout, and somewhat conical; it is short, not passing beyond the rest, as in the dog, or lion.

The two first molars are termed the *Bicuspidati*, because they are crowned with two blunt points or eminences; they are smaller and weaker than the succeeding grinders, hence are they sometimes called *false molars*, but this term is more fitly applied to the corresponding teeth, (though their number varies,) in the lower mammalia. The true grinders or molars, are three (on each side) in number; they are large, broad, and stout; the first exceeding the two last, in all its dimensions. Their

surface is raised into four blunt eminences, divided by a deep and irregularly cruciform depression. When the upper and under jaws are in due relation to each other, the incisor teeth are the only ones which have a scissor-like action on each other; the grinders are opposed face to face; those of the lower jaw being each in advance of its fellow in the upper, by about half the length or area of its surface; a circumstance resulting from the diminished size of the incisor teeth of the lower jaw, which brings the grinders into a more advanced situation. The annexed sketch is a lateral and upper view of the teeth, of one side of the lower jaw.



Among the omnivorous animals we must include the extensive tribe of monkeys, whose teeth in their general character approximate to those of the human species. These animals feed on fruits, roots, eggs, and, in some instances, young birds, small reptiles, and insects; hence their teeth are larger and stronger in proportion than those of man, and the canines especially developed, so much so as to be very formidable weapons of offence. In general, the eminences on the surface of the grinders are pointed, and this is especially the case in such as feed to a great extent on insects; the ouistitis for example, in which group this peculiar feature is very apparent.

In the lemurs, galagos, and loris, the teeth are also equally adapted for fruits and tender animal substances; the molars having conical points, which, when the jaws are closed, lock into corresponding furrows or depressions, each tooth being adapted to its opposite fellow.

The varying diet of omnivorous animals requires an according modification of the instrument necessary to the procuring of it. Where the food is wholly of the same nature, as in the ox or the tiger, we find the teeth to be the essential instruments, though the tiger uses his talons in lacerating his victim; but in omniverous animals we find the *hand* given as an additional agent; it is, indeed, the almost exclusive organ for that important work. The monkey and the lemur seize their food with the *hand*, whether that food be fruits or small animals; and they thus convey it to the mouth. The true opossums which also feed on a mixed diet, (though they prefer small animals, as birds and reptiles, together with eggs, etc.,) use the hand in the same manner. The squirrel, at first, may be supposed to do the same: such is not, however, the real fact; it merely holds firmly between its paws, the nut or fruit, to which it applies its chisel-like incisors. In the cases above alluded to, the hand, for such it is in truth, is used for grasping, holding, and seizing.

Leaving the omnivorous animals, which insensibly blend into the next group, we proceed to consider the carnivorous. In this group there are three decided forms, namely, the insectivorous, the truly carnivorous, and the piscivorous, or fish-eaters.

The omnivorous mammalia pass so gradually into the insectivorous group, that the division-line is difficult to be determined; nor does it much matter whether we place the opossums as the last of the omnivorous, or first of the insectivorous section.

When we use the word insectivorous, it is not to be supposed that insects necessarily form the exclusive article of diet, but merely a considerable portion. Small quadrupeds, birds, eggs, and small reptiles being also frequently added. The characters which the teeth of insectivorous animals display consist in the sharpness of the incisors and acute point of the canines, and especially in the sharp conical or compressed eminences with which the crowns of the molars are furnished, and which lock in with each other when the jaws are closed. It is thus that the smallest insects or other minute bodies are crushed between the serried points. The teeth of the bat, mole, hedge-hog, etc., are examples.

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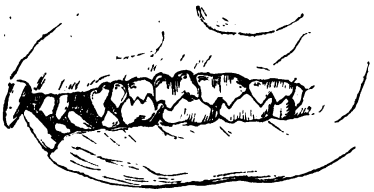
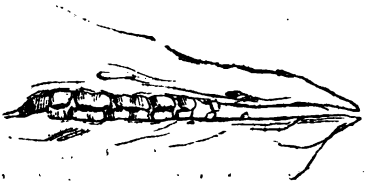
We have selected those of the hedge-hog, as the subject of our annexed sketch.



It is among the insectivorous animals that we find the greatest number of species which pass the winter in a state of hybernation. Of these we may mention the bat, the hedge-hog, and the tanree. Whether the shrew hybernates or not, is not clear: most probably it does.

We must not here pass over a singular group of insectivorous animals, whose dentition is so different from that which we have alluded to, and whose manners and general appearance are so remarkable as to have led to their arrangement into an order by themselves. They form the Edentata of Cuvier; so called because they possess either none or a very limited number of teeth. We allude to the armadillos, ant-eaters, and pangolins, to the echidna, ornithorhynchus, and the chlamyphorus. With the exception of the armadillos, which occasionally devour soft fruits and carrion, they feed upon tender insects, which are either just bruised by the cylindrical grinders, or swallowed entire, ants and termites, and worms, constitute their staple food; hence they do not require sharp pointed grinders, or keen-edged teeth. Accordingly, we find the molars cylindrical, with flat surfaces, and at a distance from each other: in number they differ exceedingly; the echidna has none; the ornithorhynchus two on each side, above and below, of a horny texture and appearance; others have more. The subjoined is a sketch of the dentition of the Cape ant-eater, (*Orycteropus Capensis.*)



In our next number, we shall consider the truly carnivorous and piscivorous, together with those animals which feed purely upon vegetable substances.

ROSE AND CROWN LANE:

OR,

A SKETCH OF MY NEIGHBOURHOOD.—No. X.

The last house in our row is occupied by the widow Allen, an honest, industrious woman, who gets her living as a laundress. The widow and her family afford a striking and pleasing illustration of two observations which, though neither new nor uncommon, are, at least not unimportant. One is—That in every condition of life, and under any circumstances, the happiness of individuals and families may be greatly promoted or hindered by their own conduct. The other is—That the most valuable and efficient help that can be rendered to the poor, consists in putting them in the way to help themselves; and that this kind of charity may be practised by those who have not the resources of wealth at command.

Mrs. Allen was left a young widow with five small children. During her husband's life-time, the family had lived in a decent, comfortable manner, for working people; but a long illness had entailed expenses far beyond their little savings, and the allowance of the sick-club to which Robert Allen had long been a subscriber. But what a satisfaction it was to the poor sorrowing wife, when she received the weekly allowance, and laid it out on necessaries for the family, or comforts for her sick husband, to think that such a resource had been provided by their own industry and frugality in the time of health; and that they had not now to go to the parish for relief! What a comfort, too, to the dying father to see his children fed, though he was no longer able to work for them; and to cherish the hope that even when he was taken away, their mother's thrift and industry would prove a portion for them! If young people, both before and after marriage, did but realize such circumstances, through which it is very probable they may be called to pass, surely they would not, by expending every shilling of their earnings on dress, pleasure, or extravagance, deprive themselves of the honest satisfaction of accumulating a little independence for a day of need. Such a resource will be found worth all the

exercise of self-denial which it may have required. Such was the opinion of my honest neighbours, in which all who have made the experiment concur. However, notwithstanding all their prudent foresight, the resources of these worthy people did not hold out through the long season of affliction. The care of her little family, and attention to her sick husband, rendered it almost impossible for Mrs. Allen to earn any thing towards their support. For several weeks they had nothing but their little savings and the club to depend upon; and the poor bereaved widow found herself left, not merely without any provision for the support of her helpless family, but encumbered with several debts which had been unavoidably incurred during the illness of her husband.

Robert Allen and his wife had always conducted themselves in such a manner as to deserve the respect of their neighbours, and many were the expressions of their sympathy. A few were ready to render the widow such assistance as was in their power; but the most part satisfied themselves with empty professions of pity. Some beset the poor woman with officious and obtrusive advice; and some were even selfish enough to endeavour to make some advantage of her distresses. "Of course, Mrs. Allen," said one neighbour, even before her poor husband was laid under ground,—"of course you will be leaving this house at quarter day, so I thought there could be no harm in speaking to the landlord to let us have the refusal; and if we should have it, it will be better for you, as we shall be willing to take your grates and things as fixed. They will fetch you next to nothing if you have them pulled down and offered to the brokers." "I know a little how matters go," said Mrs. North, "and I am willing to take your mahogany dining table and double chest of drawers, and cross your little bill out of my book; not that I am in want of the things, but of course you will not be able to keep them; and, between neighbours, if there is a little difference, I shall not be over particular."

It was cruelly harassing to the poor woman in the midst of her affliction, to receive all these applications. Stunned by the blow she had experienced, and caring little about house or furniture, now he was gone with whom and for whose sake they were enjoyed, she was not capable of making a fair calculation as to the value of her little property, or the justice of the proposals made to her; but perhaps too credulously taking it for granted that where kindness was professed kindness was intended, or perhaps worried by the importunity which thus unfeelingly obtruded on her grief, she was on the point of accepting these proposals, when she was recalled to her senses by a truly kind and disinterested friend, Mrs. Duncan, who having herself experienced affliction, came to express her genuine sympathy for a neighbour in distress. Her discreet and kind attentions, so unlike the coarse and random, if not interested offers and suggestions of other neighbours, found their way to the heart of the widow, roused her attention, and won her confidence. Some one had rudely remarked that it was a shocking thing for a poor widow to be burdened with such a set of helpless children, but that the parish would be obliged to take some or all of them off her hands. The heart already bowed down with grief was ready to burst at the cruel intimation. "My helpless children a burden! and a burden of which the parish must relieve me! And is it come to this? Must I part with my poor dear children? No. I can part with every thing beside; but let me keep my children. A burden! They are my only comfort, now their poor father is gone."

"Ye know the heart of a stranger," was the affecting plea employed to enforce on the Israelites the duty of compassion and kindness to strangers. Of all who visited and professed kindness for the widow Allen, Mrs. Duncan alone was able really to sympathize with her; for she alone knew the bitterness of bereaved affection. She knew, too, what it was to lose worldly possessions and to feel their loss, not for her own sake, but for the sake of those dependant on her; and she knew the healing influence both of pious resignation and of well-directed exertion, even in the most discouraging circumstances. Thus, in humble imitation of our great Example who, by enduring temptation, could fully sympathize with, as well as succour them that are tempted, she knew how to speak a word in season to the heart-broken widow. In a friend and counsellor, a spirit of discretion greatly enhances the value of a spirit of kindness: "She openeth her mouth with wisdom, and in her tongue is the law of kindness." Who can tell the worth of such a friend in the season of sorrow? A few soothing and en-

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couraging words to the widow were all that Mrs. Duncan suffered to escape her, in the presence of the inquisitive and obtrusive advisers by whom she found the widow surrounded. She suggested no plan, offered no advice, yet imperceptibly restrained her from committing herself to any of their proposals; and even succeeded in repressing their unfeeling impertinence, and at length in wearying out their patience, and relieving the poor mourner of their presence. On finding herself alone with her considerate neighbour, the widow silently mused awhile on her calamity and her circumstances. To a real mourner, a few moments of silent musing, impart a soothing influence, which strikingly contrasts itself with the whirl and distraction of feelings excited by a host of officious comforters pouring in consolation faster than it can be received. It is no small attainment in a visitor of the afflicted to know when to speak, and when to be silent. The first word that fell from the lips of the widow, proved that her most embittered feelings arose from the idea of her children being a burden to her, and a burden which it was considered ought to be thrown upon the parish.

"No, my friend," said Mrs. Duncan, in a soothing tone, "your children, though a charge, are not a burden. Those who would represent them as such, are strangers to the feelings of a mother's heart. They will form the most interesting and effectual stimulus to enterprise and exertion; and I trust they will prove both the solace and the reward of every effort you can make for them. Come now, let us calmly consider what is to be done. Have you formed any plan for the future maintenance of your family?"

The poor widow declared herself willing to work day and night for the support of her children, and to live on the hardest, scantiest fare, if she might but have them living with her. Her first wish was to dispose of her good furniture to pay the doctor's bill, and several others that had unavoidably accumulated. She had hoped that it would have produced sufficient to discharge her debts, and leave her in possession of a few most essential articles for the use of her family; but if she accepted Mrs. North's offer of taking for her bill the chest of drawers and table, which were among the best of her goods, she feared that the remainder would barely suffice to clear her other debts, and leave not even a bed for herself. Well, she would take the humblest apartment she could find, and would sleep upon straw rather than part with her children. Then as to getting them food: it was a comfort to her to think that they were healthy and not dainty, and if they could not live as well as they had been accustomed to do, they would be content with harder fare. As to the kind of employment by which she hoped to procure that humble fare, she was ready to turn her hand to any thing honest. With household work she was familiar, having before her marriage lived in respectable families, among whom she might possibly now get occasional employment. She was expert in the business of the laundry, and might, perhaps, obtain washing to do at home. She was pretty handy with her needle, having been used to make all the garments of the family, and occasionally to employ her moments of leisure in binding shoes, or in sewing for the shops. Shop-work, to be sure, was hardly paid;* but even a hard-earned penny was not to be despised. By some or all these pursuits, or any other to which she was equal, she hoped to gain employment, and to get bread for her children.

Such a spirit of industry and gumption as the widow discovered, carries in itself one of the best pledges of success. It also deserves and encourages the enlightened assistance of those who do not confound the operations of charity, with either constrained contributions for the support of parochial pauperism, or with indolent and indiscriminate almsgiving; but who love to see the poor enabled to support themselves in honest independence, and rising by their own exertions. With several such benevolent individuals Mrs. Duncan was intimate, and she hoped to obtain their assistance in extricating the honest and industrious widow from her difficulties, and putting her in a way to support her family.

On investigating all the circumstances, this judicious friend conceived it possible that the family, by a little management, might be kept in possession of their abode and furniture, and that it might even form the element of their

* May it be permitted to suggest a hint to those who are making fortunes by the sale of ready-made clothing, whether they can reconcile it to their consciences, and to the precepts and spirit of the Bible, to screw down to the lowest possible scale the pay of their work-people. If those by whose industry they are enriched, are themselves barely kept from starving, are they not guilty of grinding the faces of the poor? and will not God regard it?

future maintenance. The furniture, she observed, if sold, would scarcely realize a quarter of its value, and leave the family to begin in utter destitution. A small, inconvenient, unfurnished apartment would stand at almost as high a weekly rent as the cottage and all the conveniences with which the thrifty pair had surrounded it, and would afford no room or opportunity for carrying on profitable employment. In such a change of abode, it might be just possible, by struggling industry, to obtain the bare means of prolonging existence; but comfort and advancement would be out of the question. Having exacted from the widow a promise that she would enter into no engagement about parting with either her house or furniture, without informing her, Mrs. Duncan went to lay the case before one or two benevolent gentlemen of her acquaintance. No sooner had she left the house, than Mrs. Allen was again assailed by her officious advisers. The person who wished to take the house told her she knew that the landlord intended forthwith to seize for a quarter's rent, and Mrs. North was bitterly incensed at Mrs. Allen's ungrateful rejection of her kind offer, and declared she could not afford to lose her money, and must take means for getting it. The poor widow was perplexed, and in some degree intimidated, yet her regard to her word, and her confidence in the sagacity and good-will of the friend to whom she had laid open her affairs, induced her to stand firm against the threats and persuasions of her interested neighbours.

On the representation of Mrs. Duncan, one of her friends undertook the case. Being satisfied of the poor woman's spirit of integrity and industry, he agreed with the several creditors that they should receive their debts by weekly or monthly instalments, which, in almost every instance, they were quite willing to do. The Norths alone seemed disposed cruelly to oppress the widow, when they could not take an unjust advantage of her necessities. The landlord declared that he had no wish either to get rid of his tenant, or to be hasty in pressing for his rent, considering her afflicted circumstances, but that his wife had been informed for a certainty that Mrs. Allen was selling off her furniture, and that if they did not immediately bestir themselves, there would be nothing left to pay the rent. The author of this report was no other than the *friend* who had so kindly offered to purchase the fixtures, and had warned Mrs. Allen of the landlord's intention to seize her goods! These matters were soon adjusted; North's bill, which, with all its high charges, and entries of articles which the poor woman felt sure had never been obtained, did not amount to half the value of the drawers and table, was immediately discharged by Mr. Benlow, the benevolent friend of Mrs. Duncan. By this kind interference, the poor widow was placed in a state of security, and retained for her own use, and that of her family, the habitation and the comforts to which they had been accustomed.

It remained for her now to devise and put in execution some means for their future support, and for liquidating the claims of justice. At the suggestion of Mrs. Duncan, Mrs. Allen announced that her best room was to be let; and in a very short time, it was taken by an old man, with some small but stated provision, who, having outlived his family, wished to place himself with some decent person, who would attend to his little wants, and bear with his infirmities. For this charge Mrs. Allen's kind, active, and cleanly disposition well qualified her. The old man soon entered her apartment, which he still occupies; and though he is said to have so bad a temper that nobody else could bear to live with him, Mrs. Allen has so managed, and so taught her children to behave and to put up with his oddities, that they have all along lived harmoniously together. For lodging, furniture, and attendance, old Andrews just pays enough to clear the rent of the house. "How thankful ought I to be," said Mrs. Allen, when she received the first payment, and directly carried it to her landlord, "that good Mrs. Duncan persuaded me not to be hasty in giving up my home, and parting with my furniture! If I had let Mrs. North have my drawers and table, I could not have taken this lodger; and if I had left my house and gone into a lodging, I could not have made any thing of it, and my family also would have been living in wretchedness. But now my house and furniture have worked for me, and still they are my own. And my poor children too, who, they said, were such a burden to me!—why, Joseph and Sarah can

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either of them wait upon Mr. Andrews almost as well as myself, and keep the house tidy, and mind the little ones when I get a day's work out."

Not a stone was left unturned by the industrious widow. Among her own previous connexions, and by the recommendation of Mrs. Duncan, she got employment at home and abroad in household work, washing, ironing, and needlework; and she was indefatigable in turning every moment to the best account. An early riser, a good contriver, nimble in her movements, persevering in her exertions, frugal in her expenditure, and training her family to habits like her own, she has, under the crowning blessing of Heaven, experienced that "the hand of the diligent maketh rich." Within three years, she was enabled to clear off her debts, including the money that had been kindly advanced to her. But before that time, her enterprising industrious spirit had encouraged her friends to make a further effort in her behalf. Often had she wished to become the possessor of a mangle, as the means of lightening the labour, and increasing the profit of the washing she already took in, and as affording a new source of profit in taking in linen to mangle. Already had she promised herself when all her debts were discharged, to begin saving towards the purchase of a mangle; the children had even begun to save a few pence of their own earning to facilitate the attainment of this great object, when it was most unexpectedly brought within their reach. The widow's son having been sent one evening to carry home a basket of linen, stumbled over something in the road, which proved to be a canvas bag containing money to a considerable amount. He immediately brought it home to his mother, rejoicing in his prize, and probably without any clear idea that it did not belong to them. The widow Allen often confessed with deep regret that she was "no scholar," but she gladly availed herself of the privilege of gaining good instruction for her children. It needed, however, only a moment's consideration, and the exercise of a principle of simple-hearted integrity, to convince her that the owner of the bag should be sought, and his property restored to him. Taking her little boy with her, she went and consulted her friend Mr. Benlow, as to the proper mode of proceeding, and begged permission to leave the treasure in his hands until the owner should appear. Mr. Benlow received the trust, and took proper measures for finding the owner. In a few days, the bag was claimed by a rich old farmer and grazier who had dropped it in going from market. It may be concluded that Mr. Benlow properly stated the circumstances of the finder, and the propriety of liberally rewarding the integrity of a poor family; but liberality made no part of the farmer's character. He eagerly seized the bag, containing more than a hundred pounds, and grudgingly left about as many pence by way of reward. Ten shillings was the utmost stretch of his generosity. The widow and her son received it with thankfulness, and by joint consent, immediately handed it over to Mr. Benlow, in part of payment of the money formerly advanced, the boy exultingly observing, "Now, mother, we are ten shillings nearer to a mangle!" Mr. Benlow, who had resolved on some substantial expression of his approbation, and whose liberal soul devised more liberal things than did the niggardly farmer, consulted his friend Mrs. Duncan as to the real desirableness and advantage of gratifying the wish of Mrs. Allen, and furnishing her with a mangle. And as she decidedly approved the project, Mr. Benlow immediately advanced the money for the purchase of a convenient mangle, to be paid for by small monthly instalments, and made a handsome present to begin clearing off the purchase-money. Several other friends happening to hear of the circumstance, desired to contribute; and, in less than another year, the honest widow had paid off all her other debts; the mangle also was her own. Thus she has ever since been comfortably supported.

Her children have been brought up in decency and credit, and as early as possible put to useful employments. The elder girls have enjoyed the privilege of kind Mrs. Duncan's instructions, both of a religious kind in her Sunday-school, and of a domestic kind, being alternately employed in assisting her in her little household matters, and thus fitted for respectable service. Two of the girls have been some time in good situations, to which they were recommended by Mrs. Duncan. One assists her mother in the laundry-work, and also waits upon Mrs. Duncan. The youngest is just

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beginning to take her turn in both employments, as well as in needle-work, in which Mrs. Duncan kindly permits her granddaughter to instruct her.

Instances of genuine integrity and generosity seldom fail to make an impression, even on the minds of those who possess but a moderate degree of the same qualities. Several years had elapsed since the affair of the canvas bag, and the circumstance was rarely alluded to, except, indeed, in slight connexion with a favourite theme, the generous kindness of friends in enabling the family to obtain the mangle. The niggardly grazier was but little remembered. He, however, had not forgotten the honest family; and, having been frequently injured and irritated by the unfaithfulness of servants, especially of several who, in succession, had been employed in carrying out milk, he resolved to find out the widow and her son, and to offer the latter what is technically termed "a milk-walk;" that is, the supply of a certain district with milk, on account of the owner of the cows, but on which the actual vender receives a profitable commission. The lad, though steady, was but young, and it was doubted whether he would have strength and address enough for the engagement. He was, however, desirous to try. For two years he has done his best; and as he is every day growing older and stronger, and the old grazier says that he finds he may be trusted, (no mean praise for one who has the care of another's property,) and as the customers all say the milk is far more pure, and the reckonings far more correct than under former administrations, it may be concluded that Joseph Allen is established in the office of milkman. Honesty is the best policy. Those that "make haste to be rich" often outrun their mark. I suppose Joseph Allen does not actually gain so much money as his predecessors, who used to cheat their master in the quantity, and the customers in the quality of the milk; but he gains enough. He is able to keep himself in a decent and respectable manner, and to contribute to the comfort of his mother, who is not so young now as when she used to toil day and night for him and his sisters, to keep them and herself without help from the parish, and to lay by a little store for a future day. It is pleasant to see in children a disposition to requite their parents; Joseph and his sisters are remarkable for this. I often see him bustle in, wash his milk-pails, and then hasten to turn the mangle, or tie up the line, or chop wood, or carry out a basket of linen too heavy for the females; and though they be trifles, it is pleasant to see him bring home from the meadows a handful of mushrooms, or cowslips, or sloes. It is always good for young people, when abroad, to think of what will please their friends at home. The girls in service too, at least once or twice in a year, send their mother a shawl, a pair of stockings, a little tea and sugar, or whatever they think will be most acceptable. None but a mother who has toiled for her children knows the sweetness of such little gifts. Well, they cannot do too much for such a mother; and as far as I have seen, both in this family and others, such conduct is generally honoured by the Divine blessing on them and their substance.

I cannot take leave of the honest washerwoman and her happy family, without noticing one feature, which, I fear, is not universal among the sisterhood; namely, a conscientious scrupulosity in regard to the property of others committed to their care. Their customers have never to complain of linen being lost, or kept back, or worn by others, or rotted by the use of improper ingredients in the wash-tub or copper. I am sure that if an article, however trifling, that had been entrusted to the widow Allen, were mislaid or injured, she would have no rest till it was found and restored; and nothing could induce her to make use of any injurious preparation, although she might thereby save half her trouble, or double her profits. Such conduct answers best in the long run; she keeps her customers as well as gains them; no person who has employed her is likely to think of bettering themselves by leaving her. On the contrary, all are ready to recommend her to their friends, so that she has plenty of constant employment. She is, however, too honest to undertake more than she can properly do, without either trespassing on the Sabbath, over-working her girls, or employing people on whom she cannot depend.

I do not set up for a fortune-teller, but I sometimes think what will probably be the circumstances of the families near me a few years hence; I mean not as to the course of events which are

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beyond human control and calculation, but as to the tendency of conduct. With this view, I invite my readers next month to accompany me once more along our row, after which I shall take leave of them and my neighbours.

OLD HUMPHREY ON DESIGNS FOR PICTURES.

I WANT to address a few words to the poor and aged followers of the Redeemer.

If, therefore, you are old, and your coat be a little seedy and threadbare, or your red or brown cloak somewhat the worse for wear; if poverty be your lot, and trial in one shape or other be your daily food, you are the very person that I wish to talk with, if, as a Zion-bound pilgrim, your eyes are looking to the cross of the Redeemer.

Old folks should help one another along the rugged roads of life, when they have the opportunity, and a word in season is often a cordial to the heart: let me try to interest you a moment. Are you fond of pictures? Most people are, the child of seven, and the man and woman of seventy. I am as fond of them now as I was when for the first time in my life I opened the pages of "Pilgrim's Progress," and gazed on Christian with the burden falling from his back as he came up to the hillock on which the cross was standing.

It has often struck me, that had I been a painter, I should have been very happy in the choice of my subjects. "Ay," you will say, "there spoke the pride of Old Humphrey." Perhaps it may be so; but you shall have a sample of some of my designs, and then you can judge for yourself. What think you of this?—

An old man and death wrestling for a few grains of sand in an old hour-glass.

It is from the life, as most of my sketches are. See how the grim skeleton points his dart at the most vital parts of his enemy; and see, too, how the old man grasps the bony arm of his opponent to stay his stroke. They are grappling as though this and another world were the stakes, instead of a few grains of sand in an old hour-glass. How is it with you, my old friends? Does this picture hit you off, think you? Is there any likeness in it? Are you clutching the hour-glass of your old age, to secure the few grains of time it contains? Are you struggling with death as with an enemy that would rob you of your dearest treasures? or are you, like Simeon of old, ready to stretch out your hands towards heaven, and say, "Lord, now lettest thou thy servant depart in peace; for mine eyes have seen thy salvation?" Here is another—

Hope and Faith opening the doors of heaven.

This would make a fine picture! Hope smiling with her anchor beside her, "that anchor of the soul which is both sure and stedfast, and which entereth into that within the veil;" and Faith clinging to the cross whereon once hung the Redeemer; both of them should be seen opening the golden gates through which a flood of glory is pouring wide, affording us a peep at heaven, while yet we are upon the earth.

I hope that this design suits your taste, and, if not, I trust the next will—

Trial and Affliction taking away a purse of gold, and leaving in its place a bag of diamonds.

An odd design this, but, if well painted, you would call it a capital good one. The poor patient, when he lost his gold, thought it was all over with him; but see how hopeful and how happy he looks now; he has just discovered the diamonds that have been left him.

How many a thoughtless prodigal has spent his substance in riotous living, till God in mercy has stretched him on a sick-bed, his strength has declined, and the cordials and comforts, and doctor's bills, have taken away the remainder of his money, and he considers himself lost, but at last he discovers himself to be richer than ever. "Tribulation worketh patience, and patience experience, and experience hope." "No chastening for the present seemeth to be joyous, but grievous; nevertheless afterward it yieldeth the peaceable fruit of righteousness unto them which are exercised thereby." Here then are his diamonds, patience, experience, hope, and the peaceable fruits of righteousness. Before he was afflicted he went astray, but now he keeps the commandments of God.

You can judge of my talent for designing from three as well as from threescore specimens; and if you think me but a poor draughtsman, why there is no necessity for my troubling you with any more of my designs.

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However, look over these once more, and try if you cannot get a little real good from the imaginary sketches of Old Humphrey.

AVARICE.

It is not twenty years since a remarkable instance of the power of this wretched vice was frequently observed. The name of the individual referred to was Hollings. He was a native of Hereford: and, after enjoying the advantages of a liberal education, and occupying a respectable standing in society, he surrendered himself to the ruling passion of his mind. It is said that its sway was disputed during a lengthened career, in only one solitary case.

His appearance was grotesque in the extreme. His capacious pockets seemed to be the chief object in the making of his coat, which was of the coarsest texture, and originally of a black colour, but to which time had given another hue. His waistcoat was of similar materials, and being also furnished with long pockets, in compliment to his coat, it was met above the knees by a pair of worsted boot-stockings. The wardrobe of his mother, who died about thirty years before him, was rendered very serviceable. His hat was round and shallow, his hair sandy, and to increase the oddity of his appearance, it despised the control of a black wig. Thus arrayed and equipped with his rod and basket, an accurate portrait was made of him by an artist.

His living and furniture strictly corresponded with his appearance. Every office of every description was performed by himself; for no domestic was admitted within his walls, lest they should rob him. A few pennyworths of tripe, and a quart of the water in which it had been boiled, sometimes formed a meal of unusual indulgence. The process adopted in this case was worthy the occasion: it consisted in soaking the crumbs hollowed out from the loaf for the first day's repast, and in placing the tripe itself in the cavity of the loaf for the next day's feast. A steak from the butcher's was an extravagance in which he rarely indulged.

While the gun and the rod of this miserly being afforded a casual supply, his chief reliance was on the bounty of his relations, or the presents of his numerous friends, who from his professions of esteem, or their constant assiduities, supposed themselves reasonable expectants of his property. At a very early hour, he left his bed in search of some kind of provender. If observed in a wood, his gun was his excuse; if near a river, his rod; while the fishing-basket at his back not only concealed the hole in his coat, but served to contain his plunder.

On one of these marauding expeditions, when hares were often mistaken for *rabbits*, and tame ducks for *wild* ones, he discovered in his favourite walk on the banks of the river Lugg, the mutilated remains of a large-sized pike, which, after satiating the otter, was secured as a noble spoil, and furnished many dinners of unusual luxury. On another occasion, he was apprehended while sitting near the confines of a wood, watching for game, within a circuit of the adjoining field, which he had carefully marked out by sticks placed in the ground, to show the distances at which he might depend on the action of his gun, with the least possible risk of discharging it without effect. Conducted in custody by the gamekeepers to the lord of the preserve, mutual congratulations were exchanged on the capture of a wholesale poacher, who had so long eluded their vigilance. Forthwith his capacious and distended pockets were unloaded, but great was the surprise and disappointment, when, instead of game, there were found a miscellaneous collection of potatoes, sticks, turnips, glass vials, and hogshead bungs, all purloined from a neighbouring cottage in which he had found shelter during a storm!

Many intimacies, indeed, were formed with the cottagers of the district, in his rural walks; and he often put them to the cost of maintaining him for a week, under pretence of remembering them in his will. From his more opulent friends he frequently solicited the gift of a hare, which he turned to very good account by fixing himself for a long time with those to whom he presented it. Once, however, he must have been not a little disconcerted. A gentleman of Hinton, on receiving an application of this kind, made his compliance with the request dependent on the condition that Hollings should prove he had given away on some one occasion, what had cost him the value of a hare: but as compliance was impossible, his appeal was fruitless, and

the gentleman applied to was never forgiven.

The circumstances of the death of this miser accorded with the ruling principle of his life. Abruptly and harshly he pressed for immediate payment of principal from a tradesman who had assisted another person with his name in borrowing a hundred pounds. The interest was paid, but the acknowledgment was given on unstamped paper. The person who received it feeling aggrieved at the severity of Hollings, laid an information against him for the omission, and the penalty of five pounds was recovered. This was the death-blow of the wretched man; from that moment, to use his own words, he "could neither eat, drink, nor sleep." He lingered for about five weeks, under this mental depression, gradually declining in health and spirits. At length, his street-door being forced, he was found dead in a miserable room of an equally miserable house, without fire, curtains, sheets, or any other visible comfort.

What an exemplification is thus presented of the folly, guilt, and vileness of avarice! Its victim recklessly "throws up his interest in both worlds." The melancholy fact has been attested in the most ample manner by the common sense of mankind. St. Paul, too, announces it with all the force and solemnity of inspiration, when he says, "They that will be rich fall into temptation and a snare, and into many foolish and hurtful lusts, which drown men in destruction and perdition."

Against every tendency to this enormity and its inevitable woe, it becomes us to guard. The tenth precept of the moral law reaches expressly to the movements of the heart; and hence it appears to be auxiliary and supplementary to the other commandments of the sacred code. It is the safeguard of all the requirements of the second table, and it comes in at its close, to remind us that there must be purity within as well as without.

"Keep thy heart," says the wise man, "with all diligence." Nor can obedience be too constant, or too minute. A covetous desire is the germ from which may spring a poison-tree like that now contemplated, whose atmosphere is pestilential, and the eating of whose fruit is eternal death.

NOVEL TROUT FISHING IN SWITZERLAND.

We found the fish at dinner so delicious that we asked to have some for our breakfast the next morning. Scarcely had we expressed these gastronomic desires, when the mistress of the house summoned an attendant of about eighteen or twenty years of age, who discharged the various functions of butler, scullion, waiter and boots. He came half asleep and got the order, in spite of some expressive yawns, the only opposition the poor fellow dared offer to his mistress's commands.

"Go, you idle knave," said she to Maurice, for so this functionary was named, "take your lantern and bill-hook, and be quick." A lantern and bill-hook to fish with! From that moment it was all over with Maurice; for I was seized with an irresistible desire of seeing fishing managed like fagot-making. Maurice heaved a profound sigh; for he thought he had no hope, having been so often in the same predicament, that there was little chance of a miracle in his favour. He took then, with the energy of despair, a bill-hook which hung in the midst of the kitchen materials, and a lantern of such singular shape that it merits a detailed description. It was a globe of horn, like the round lamps we suspend from our ceilings, to which was fixed a tin tube about a yard long, of the thickness and shape of a broom handle. As the globe was hermetically closed, the wick which burned in the inside received air only through the tube, and could neither be extinguished by the wind nor the rain. We soon reached a mountain stream, issuing from a distant bend of snow, and Maurice, to my great surprise began gravely to strip, and invited me to follow his example. Maurice waded up to his middle in the stream, and commenced a fishery of which I had before no notion, and which I should scarcely have believed possible had I not witnessed it. The lantern, with its long tube, was designed to explore the bed of the torrent, whilst the pipe rising above the surface of the water afforded sufficient air to support the flame of the wick. In this manner the bed of the stream was revealed by a circle of weak and wavering light, diminishing in brilliancy as it receded from the bright and luminous centre. The trout within the circle attracted by the

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light, swam towards the globe like moths fluttering round a candle; then Maurice slowly lifted the lamp with his left hand, while the fish followed the light; as each trout came to the surface, Maurice struck it so adroitly with his bill-hook on the head, that it fell stunned to the bottom, whence it soon rose dead and bloody, and was immediately removed to the pouch which Maurice wore like a game-bag suspended from his shoulders.—*Dumas' Travelling Impressions.*

KINDNESS AND UNKINDNESS.

The following particulars are related by Dr. Dwight, which he states that he considers to be substantially true:—

Soon after the county of Lichfield, in America, began to be settled by the English, a strange Indian arrived at an inn, and asked the hostess as the evening was advancing, to provide him some refreshment; at the same time observing, that from failure in hunting he had nothing to pay, but promising compensation whenever he succeeded.

The plea was, however, in vain: the hostess loaded him with opprobrious epithets, and declared that it was not to throw away her earnings on such creatures as himself, that she worked so hard. But as the Indian was about to retire, with a countenance expressive of severe suffering, a man who sat by directed the hostess to supply his wants, and promised her full remuneration.

As soon as the Indian had finished his supper, he thanked his benefactor, assured him that he should remember his kindness, and engaged that it should be faithfully recompensed whenever it was in his power. For the present, he added, he could only reward him with a story, which, with the permission of the hostess, he wished to tell. This being given, from complacency in the prospect of payment, the Indian having found that his benefactor read the Bible, thus proceeded:—

"Well, the Bible say, God made the world, and then he took him, and looked on him, and say, It's all very good! Then he made light, and took him, and looked on him, and say, It's all very good! Then he made dry land and water, and sun and moon, and grass and trees, and took him, and looked on him, and say, It's all very good! Then he made beasts, and birds, and fishes, and took him, and looked on him, and say, It's all very good! Then he made man, and took him, and looked on him, and say, It's all very good! Then he made woman, and took him, and looked on him—and he *no say one such word.*"

The feelings of the hostess as the Indian now withdrew, may be easily imagined. The arrow which had been so acutely barbed, could not fail to penetrate her bosom. "Acts of unkindness," says the proverb, "are like young birds; they always come home to roost." She had violated the law of benevolence, and deep mortification was one of the forms in which the penalty was to be paid.

The spectator of her punishment had occasion some years after to go into the wilderness between Lichfield and Albany, where he was taken prisoner by an Indian scout, and carried to Canada. On his arrival at the principal settlement of the tribe, it was proposed by some of the captors that he should be put to death; but during the consultation, an old woman demanded that he should be given up to her, that she might adopt him for a son who had been lost in the war. Accordingly he was given up to her, and he passed the succeeding winter in her family, amidst the usual circumstances of savage hospitality.

While, in the course of the following summer, he was at work alone in the forest, an unknown Indian came and asked him to go to a place he pointed out, on a given day; and to this he agreed, though not without some apprehension that mischief was contemplated. His fears increased, his promise was broken; the same person repeated his visit, and after excusing himself in the best way he could, he made another engagement, and kept his word. On reaching the appointed spot, he found the Indian provided with ammunition, two muskets, and two knapsacks; he was ordered to take one of each, and followed his conductor, under the conclusion that had he intended him injury, he might have despatched him at once. In the day-time, they shot the game that came in their way, and at night they slept by the fire they had kindled; but the silence of the Indian as to the object of their expedition, was mysterious and profound. After many days had thus passed, they came one morning to the top of an eminence, exhibiting a number of houses rising in the midst of a cultivated country. The Indian asked his

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companion if he knew the ground; and he eagerly repeated, "It is Lichfield." His guide then recalled the scene at the inn some years before, and bidding him farewell, exclaimed, "I that Indian! Now, I pay you, go home!"

Here, then, kindness received its reward. But when does it fail? The answer is, Never! An ample recompence invariably comes. Sometimes, as in this instance, it is signally conferred; but though it be not, yet, it pours a stream of ineffable delight into the bosom. No one doubts the advantage of him who accepts the boon, but that of the donor is unquestionably greater. Among the words of our Lord Jesus were these: "It is more blessed to give than to receive."

SKETCH TAKEN AT LONDON BRIDGE,

April 11, 1838.

The steam wharf is thronged with people, and a row of heads is crowning the parapet of London Bridge from the Middlesex to the Southwark side. Close to the floating platform, and on the river, lies the Canterbury steam-boat, with a goodly cargo of beating hearts, animated faces, and sparkling eyes.

The missionary to Tahiti is expected on board. Since his return from Tahiti he has passed some time on British ground. He has ably pleaded for the heathen, he has excited a strong interest in the missionary cause, he has won the good opinion of thousands, and he is now about to return to the South Sea Isles, attended with the affectionate sympathy and fervent prayers of ten thousand Christian hearts.

A ship, the Camden, the gift of Christian liberality, is lying off Gravesend, to receive the missionary; and the Christian assemblage on board the Canterbury, are about to accompany him to the vessel. The throng on the wharf consists of friends anxious to see the missionary depart, and of strangers attracted by curiosity. I am standing with a friend, on the steps leading to the temporary platform.

It is clear that no every-day occurrence is about to take place. The groups above and below are all speaking of the missionary; and the eyes of those on board the Canterbury are directed to the pier.

There is now a bustle on the quay; there is a drawing off to the right and the left. Surely he who is now descending the steps must be the messenger to the heathen. Yes, it is he; and, stranger as he is to me, I must accost him.

I have wring the missionary by the hand in silence. There is a freemasonry in friendly bosoms that requires not speech to render it intelligible. How much of the "God speed" of the heart, how much of the "Peace go with thee" of the spirit, does a wordless grasp of the hand sometimes eloquently proclaim!

How fearfully time passes away! It seems but a little space since I took Corrie by the hand, on his departure for the East. About the same time, I shook hands with Garrion, too, who departed for Sierra Leone, to make known to the sons and daughters of injured Africa the same glad tidings of salvation. Corrie died in India, the bones of the good man there repose; and the remains of the Sierra Leone missionary are mouldering in the land of his Christian labours. But where will the dust of the Tahitian missionary rest? No matter,

> For whether they sleep on the raging deep,
> Or repose on a distant shore,
> His spirit will fly, to Jehovah on high,
> And His goodness for ever adore.

The missionary carries some forty, or forty-five years, pleasantly on his brow. He is a good-sized, firm-built man, with a frame fit to grapple with difficulties, and overcome them. There is a comfortable, companionable expression too, in his countenance; nothing sinister, but all fair and above-board. Nothing that flings you to a distance. There he is in the midst of the throng on board the Canterbury, with a blue cloak hanging over his arm.

Turn which way he will, all is excitement, and warm-hearted greeting. Now a parcel is presented to him, and before he can read the superscription, another. A friend shakes him by the hand, and two or three ladies press forward to give the same token of heartfelt sympathy.

One friend introduces another; some take off their hats in respectful salutation, while others rush on with impetuous emotions. Packets and papers, and letters are pouring in; he stuffs them into his pockets, having no time to examine them. Friends flock around him, with an intensity of interest. This is an era in his life; he has given up much;

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and is repaid. Weeks, months, and years of philanthropic exertion, and Christian solicitude are requited, by this brief hour of affectionate sympathy, of heartfelt homage, and Christian affection.

But there is amid all the grateful excitement of the scene, a passing cloud on the missionary's brow, an anxious look amounting to solicitude. Though his face is lighted up by the recognition of a friend, though the eager and affectionate throng gathering around him, constrain him to feel pleasure, yet, between their affectionate greetings, his features relapse into an expression of care. His eye wanders among the crowd, as though he hoped to see some one who does not appear, or as if he expected something to happen that does not take place. Besides this little unknown cause of solicitude he has enough to try him; the past, the present, and the future, are busy with his heart.

The steam is getting up, the bell is ringing, and the parting moment is hard at hand. There is a bustle on the quay, a hurrying sensation, a closer crowding against the iron palisades. Hasty feet are descending the steps, letters, packets, and papers pour in afresh, the bell has ceased, the steam is hissing fiercely, the wooden bridge is about to be removed, a rush is being made to get the last shake of the hand. There! the throng fall back, the bridge is taken away, the machinery is heard, the signal is given, and the paddle-wheels are in motion. The missionary has ascended the paddlebox-platform, standing alone.

I have waved my hat, and he has returned the salutation. A hundred hats are now being waved in the air. As "iron sharpeneth iron, so a man sharpeneth the countenance of his friend." It is even so with a throng, when the multitude is animated, every heart brightens, and warms, and glows with added enthusiasm.

The missionary is waving his hat to the people on the bridge, but no one returns the friendly farewell. They stand as motionless as statues; they are strangers, and know nothing of him who is flinging them his farewell greeting.

As I look on the missionary, my affections warm towards him. I see him in his exalted character, the messenger of mercy, the herald of peace, the interpreter of God's word, the bearer to the heathen of the news of reconciliation and joy. Rejoice, ye people of the distant Marquesas! Tahiti, Raiatea, and Rarotonga, rejoice!

England has her conquests in the East and the West, her fame has spread far to the North and the South; but what are the blood-sullied trophies of war! What the vain-glorious accessions of ambition, compared with being strong in mercy, and great in goodness! The Holy One has honoured her more than all others, in making her a means of humanizing, moralizing, and evangelizing the heathen.

My warm-hearted companion has just proposed to give a general cheer; an animating, spirit-stirring huzza to the missionary; but some of the throng are repressed by timidity, and some by their views of propriety, so that the cheer has not taken place. Another attempt is now being made to raise an acclamation, it is but feebly responded to. Some fifty of us have raised our voices, but altogether the cheer is discreditable. Our hearts are excited, we want not to agitate merely, but to rend the air. The prevailing emotion requires not the lisping of a lute, but the full diapason of an organ; not the scattered moaning of the distant winds, but the gathered burst of reverberatory thunder.

The steam-boat is far distant! in another moment it will be hidden from view by the craft in the river. I will try once more to catch the notice of the missionary, by waving my handkerchief in the breeze. He sees, he answers the signal; his hat is again in his hand, waving above his head; he has given me his last greeting: the steam-boat is gone, and we are gazing on the point whence it disappeared.

Go, faithful servant of a merciful Master, girt around with the sustaining promises of thy Leader and Lord. Yes, go to the sunny lands of the yam and the cocoa-nut, the plantain and bread-fruit! Go to the tangled depths of the wilderness! Go amid barbarous tribes wherever the God of grace shall lead you, for you go not alone. Fellow-labourers go with you; the heartfelt prayers of ten thousand Christian friends go with you; the high and holy aspirations that animate your heart in God's service go with you; the Holy One himself, with all the influences of his Spirit, will go with you; he will strengthen you, he will help you, yea, he will uphold you with the right hand of his righteousness.

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CHARACTER AND STATE OF THE GODLY.

Psalm i. 2, 3.

THE Psalmist having described the good man negatively as to his conduct, proceeds to describe him positively as to his dispositions towards the law of God, ver. 2. Like Jeremiah, he can say, "Thy words were found, and I did eat them; and thy word was unto me the joy and rejoicing of mine heart;" and like Paul, he delights "in it after the inner man." Amidst all the cares, and duties, and dangers of the day, and the sleepless watches of the night, he delights in reading and meditating on it, and finds it advantageous in keeping him from walking in the counsels of the ungodly, from standing in the way of sinners, and from sitting in the seat of the scornful.

And now, what is the promise descriptive of his state made to such a character? "He shall be like a tree planted by the rivers of water, that bringeth forth his fruit in his season." ver. 3. His soul shall be plentifully fed from heaven, with the never-failing influences of Divine grace and consolation, whereby he shall be made fruitful in every good word and work, as the tree is nourished by water conveyed to the roots. And observe, he does not grow there of himself; he is *planted*, planted by God. Thus Christ says, "Every plant, which my heavenly Father hath not planted, shall be rooted up." "His leaf also shall not wither." He shall not only have grace, but give evidence that he has it. And God will prosper the work of his hands upon him, yea, the work of his hands he will establish it. C. J. M.

THE GLORY OF GOD IN DISPENSING PARDONS.

IF there be any pardon with God, it is such as becomes him to give. When HE pardons, he will *abundantly pardon*. Go with your *half*-forgiveness, limited conditional pardons, with reserves and limitations, unto the sons of men: it may be, it may become them; it is like themselves. That of God is absolute and perfect; before which our sins are as a cloud before the east wind, and the rising sun. Hence he is said to do this work *with his whole heart*, and *with his whole soul*. His design in the whole mystery of the gospel, is to make his grace glorious, or to exalt pardoning mercy. The great fruit and product of his grace is forgiveness, the forgiveness of sinners. In and by this, God will render himself glorious. All the praise, glory, and worship that He designs from any in this world, is to redound to Him by the way of this grace.—*Dr. John Owen.*

THE ANTIDOTE FOR DESPAIR.

WHEN a sinner is burdened with guilt, and filled with apprehensions of eternal ruin, his language is, "What shall I do to be saved? or how shall I escape the wrath to come?" Being ignorant of that righteousness which the gospel reveals for the justification of the ungodly, he labours to obtain acceptance with God by his own efforts: till, becoming better acquainted with the purity, extent, and spirituality of the Divine law, the holiness of God, and the corruption of his own heart, he despairs of being justified by the works of the law. Now, to a person thus convinced of sin, and apprehensive of danger, oh how welcome are the tidings of the everlasting gospel, the death and resurrection of the Lord Jesus Christ, with the end of his mission into this world, which was to save the chief of sinners! How anxiously does he inquire, "Can this be true?" And in the same degree in which he credits the report or testimony concerning it, do peace, tranquillity, hope, and joy spring up in his soul.—*Hervey.*

SPIRITUAL IMPROVEMENT.

YOU never can improve in character before God, until your heart be right with God; and right it will not be made by the Spirit of God, until you take the word of God for all the mercy and grace you require.—*R. Philip.*

NATURE.

THE wheels of nature are not made to roll backwards; every thing presses on towards eternity; from the birth of time an impetuous current has set in, which bears all the sons of men towards that interminable ocean.—*R. Hall.*

THE SOUL.

NONE can render our souls happy but one who made them; nor any give a pardon to them but Christ who gave himself for them.—*Arrowsmith.*

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NOVEMBER FLOWERS AND PLANTS.

Plants in Flower.

WILD.

Charlock, *Sinapis nigra*
Swine thistle, *Sonchus oleracea*
Ivy speedwell, *Veronica hederacea*
Spurrey, *Spergula arvensis*
Annual poa grass, *Poa annua*
Marsh starwort, *Aster Tripolium*
Irish heath, *Menziesia Dabœci*
Corn violet, *Viola arvensis*
Marsh ragwort, *Senecio palustris*
Grass of Parnassus, *Parnasia palustris.*

CULTIVATED.

Strawberry tree, *Arbutus Unedo*
Sweet Coltsfoot, *Tussilago odorata*
Indian Hawthorn, *Raphilepis rubra*
Blue sage, *Salvia angustifolia*
Chinese Chrysanthemum, *Chrysanthemum Sinense*
Blue-headed gillia, *Gillia capitata*
Scarlet lobelia, *Lobelia fulgens*
Ten-petalled sun-flower, *Helianthus decapetalus*
Mountain violet, *Viola altarica*
Grey-leaved bind-weed, *Convolvulus althæoides.*

How rapidly the fair face of creation is now changing! The summer insects that fluttered in the sunshine are gone; the summer birds that carolled merrily among the green leaves are gone; and the summer flowers that bloomed so gaily in the woods, the fields, and the gardens, are all gone, all vanished before the chilling blasts of November, and the fogs which they spread over the earth. All, all speaking in language which "he who runs may read," that this is a world of change; that "here we have no continuing city."

"Oh! trust not, cling not, to the hope
Of constancy below;
Earth's fragile blossoms smile and droop,
Her waters ebb and flow;
Yon flow'ret withers as it springs,
Yon bird is on the range,
Ay, even in life's meanest things,
This is a world of change.

"Yet, though stern time some joys may blight,
Some cherish'd feelings chill;
We trust and hold one hope of light
Unchang'd, unclouded still—
The hope to win in realms above,
Of bright and boundless range,
A world of constancy and love,
A world that cannot change."

MRS. ABDY.

But though we miss, in our walks, the summer flowers that made "the fields rejoice"—the lilies and roses of the garden, the buttercup in the meadow, and the honeysuckle in the hedge-row,—there are still a few blossoms which brave the chills of the weather; reminding us, that while the all-bountiful Creator clothes the lilies of the field, so that Solomon in all his glory was not arrayed like one of these, the same omnipotent "God maketh the winter," and assigns it a due place in the seasons of the revolving year.

The wild plants now in flower are chiefly those which either blow a second time, or have continued successively to blow for several months; few blowing exclusively at this season except certain garden plants introduced from regions whose climate is different from ours.

The second flowering of wild plants, such as the primrose, (*Primula veris,*) the germander speedwell, (*Veronica Chamædrys,*) and the sweet violet, (*Viola odorata,*) is evidently designed by Providence to furnish a greater profusion of seeds, lest the first should, through any cause, be rendered too scanty for the continuation of the species. In the same way, we observe many insects and birds produce, during the season, two or more broods, while others only produce one according to circumstances, and for reasons which are beyond our investigation. Thus the swift (*Cypselus muraria*) and the nightingale (*Sylvia Lucinia*) have only one brood, while the swallow (*Hirundo rustica*) and the black-cap (*Sylvia Atricapilla*) have two. The peacock butterfly (*Vanessa Io*) and the silver-streak fritillary (*Argynnis paphia*) have only one brood, while the tortoiseshell butterfly (*Vanessa Urticæ*) and the cabbage butterfly (*Pieris Brassicæ*) have two.

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One reason for this difference may be, that a greater number of individuals of those which are double brooded, may be required in the economy of creation, than of those which are single brooded; and the fact of their being actually more numerous, whatever may be the cause, is fully borne out by observation. The later blowing flowers, however, owing to the coldness of the weather, do not so readily ripen seed as those of the first flowering, and may only be designed to continue rather than to multiply the species; while a similar circumstance holds of late broods of birds and insects, whose young do not so readily thrive and come to maturity as in the early part of the year. The writer has often seen caterpillars prevented, by cold weather, as he concluded, from undergoing the requisite transformations, previous to becoming butterflies; and young swallows, black caps, and other double-brooded migratory birds, too immaturely fledged and feeble to accompany their parents to warmer winter climes. Even the hardy primrose, though it flowers, does not readily, at this season, produce seed sufficiently ripe to germinate when sown.

One of our prettiest shrubs, the strawberry tree, (*Arbutus Unedo*,) naturally blows only at this season, and no other. It is occasionally found in a wild state in the south of Ireland, where, from the moisture and mildness of the climate, it thrives luxuriantly. Whether it was originally introduced there as an ornamental shrub, or is really indigenous, cannot now be satisfactorily ascertained. This beautiful evergreen has the peculiarity, rare in this country, though common in the tropics, of having both flowers and fruit at the same time. The blossoms of November in due time wither, and are succeeded by berries, at first small and green, and indeed continuing so for nearly twelve months, the summer's sun producing upon them apparently little influence in increasing their size, or hastening their maturity; but when November again returns, they ripen rapidly, and, at the same time, a fresh show of blossoms appears side by side with the ripe fruit. The blossoms are wax-like and bell-shaped, hanging in pretty clusters, not unlike some species of heath. The berries are like a small strawberry in colour and appearance, but instead of the rich flavour and juiciness of the strawberry, they are dry and insipid; hence the Romans are said to have given it the name of *un-edo*, meaning, "I eat one;" the eating of one being sufficient to prevent a person from trying to eat more. When, however, they are fully ripe, and are of a purplish red, they become more mellow, and several of them may be eaten with relish. They are not unwholesome. In the comparatively dry climate of London, though the strawberry tree is very common in gardens and shrubberies, the berries very frequently fall off before they arrive at maturity. Watering well artificially would probably prevent this, as the shrub is fond of moisture.

The beauty of the garden and the greenhouse at this season, is the Chinese goldflower, (*Chrysanthemum Sinense*,) of which we have numerous varieties, all imported at great expense from China, till within the last two or three years, when a number of new varieties have been produced from seeds saved in this country, a thing supposed a few years ago to be unlikely ever to be accomplished. This flower was introduced into Britain in 1754, but it was not till 1789 that the choicer varieties were brought from China to Marseilles, and in the following year were imported from France into England.

At various times, from 1790 till 1808, eight different sorts were imported from China, by Sir A. Hume and Mr. Evans; and between 1816 and 1823, about seventeen more were added to the number. The Horticultural Society of London are in possession of forty original drawings recently made in China, from growing specimens; not above four of which can be referred to the varieties previously known to English florists. Twelve of the drawings represent white flowers, some with a tinge of pink which are peculiarly beautiful, while the rest are made up of yellows, lilacs, reds, and purples, in great variety of shades and forms. The florets of some are either perfectly quilled, expanded, and long, or short, so as to form a globular flower.

Since the production of seed in this country, first, we believe, by Mr. Freestone and Mr. Wheeler, and since by Mr. Chandler, of Vauxhall nursery, numerous varieties of British origin have arisen, and bid fair to rival in number the varieties of dahlias and of heartsease.

J. R.

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THE CEMETERY.

The body, so interesting in the majority of instances, during the period of life, soon loses its attraction when it has become the prey of death. Only let the mortal stroke be experienced, and it says, "to corruption, Thou art my father, and to the worm, Thou art my mother and my sister," even when affection would fondly retain its grasp. But no plea can prove availing; for the decree is irrevocable, "Dust thou art, and unto dust shalt thou return."

All nations do something towards the speedy destruction or removal of the bodies of the departed; but the modes they adopt are exceedingly diversified. In some parts, the dead are abandoned to voracious beasts and birds; and in others, they are consigned to the rivers and the seas. In some districts of India, they are dried by fire, covered with clothes, and then deposited in the earth; in others, the whole corpse is consumed. The Arraques, who inhabit the south of the Orinoco, suspend the corpse in its cabin, until time has consumed its flesh, they then reduce the bones to a powder, which they mingle with their drink; or, having burned the body, they make the same use of the ashes.

Cemeteries are of very ancient date. The Jews had their funeral fields. As to be without burial was to them no ordinary calamity, their first care, on arriving in a new country, was to select the sites of their sepulchres. There was a public cemetery without the walls of each city. That of Jerusalem was in the valley of Cedron; and there was a distinct one for strangers, not far from that of the Pharisees.

Dr. Clarke, with reference to his view of the walls of Dschoufoutkale, says:—"In a recess upon our right hand appeared the cemetery, or field of dead, belonging to the Karaite Jews. Nothing can be imagined more calculated to inspire holy meditation. It is a beautiful grove, filling a chasm of the mountains, which is rendered gloomy by the shade of lofty trees and overhanging rocks; a winding path conducts through this solemn scene. Several tombs of white marble present a fine contrast to the deep green of the foliage; and female figures in white veils are constantly seen offering their pious lamentations over the graves. An evening or a morning visit to the sepulchres of their departed friends, is, perhaps, the only exercise of the Jewish women, as they seldom leave their houses."

It is said that the women of Egypt go, at least two days in the week, to pray and weep at the sepulchres of the dead; and the custom is, to throw on the tombs the herb which we call Sweet Basil. They cover them also with the leaves of the palm tree, or use with them the myrtle to adorn the tombs. In Constantinople, the women are extremely punctual in their visits to the sepulchres of their relations; a small pit is let into one of the ends of each tomb: in this there are constantly fresh branches of myrtle, or some small shrub, over which they frequently pour water, and preserve them with the most respectful care and attention.

In Java, the body is interred after the usual manner of the Mohammedans, and a samboja tree is commonly planted by its side. It is the universal practice of the relations of the deceased, to strew the graves several times a year with the sweet-scented flowers of the Sulaci, which are raised exclusively for this purpose.

The Nubians place an earthen vessel by the side of every grave, which they fill with water at the moment of interment, and leave it there. The grave itself is covered with small pebbles of various colours, and two large palm trees are stuck into the ground at either extremity; "the symbol of victory thus becoming," says Burckhardt, "that of death."

The custom of decorating graves once prevailed in this country: osiers were carefully bent over them to keep the turf uninjured, and about them were planted evergreens and flowers. This usage has become extremely rare in England; but it may still be met with in the churchyards of retired villages, among the Welsh mountains. To form a general emblem of the frailty of man, the lily was sometimes blended with the rose. "This sweet flower," said Evelyn, "borne on a branch set with thorns, and accompanied with the lily, are natural hieroglyphics of our fugitive, umbratile, anxious, and transitory life, which making so fair a show for a time, is not yet without its thorns and crosses."

Such are the facts associated with my visit to the cemetery of Boulogne; which I discovered at the end of a long and delightful walk; adorned on each side with trees; and furnishing a grateful

defence from the glowing beams of a bright summer's morning. This abode of the dead contains many handsome tombs, and is planted with evergreens and flowers. On some of the railings placed about them were suspended chaplets of flowers; some withering, and others fresh, as if occasionally renewed. On the left of the entrance, is the burial ground of the English; and to the right of the vaults are the graves, in two long lines, of those who perished in the convict ship Amphitrite, on the 30th of August, 1833. A column rising from the grassy and flowery sod, tells to every passenger how suddenly a large number of immortal beings were summoned to stand before the Judge of the whole earth.

The graves of the French are surmounted, according to the usual practice, with crosses of wood and iron. These are sometimes six or seven feet high; and the clusters of them, in various directions, strike at once on the view, as the cemetery is approached, or as it is seen from the neighbouring ramparts. Well would it have been if all who there wait the morning of the resurrection had entirely and exclusively relied on Him whose "blood cleanseth from all sin." But, alas! the crucifix often conceals the Saviour, whom it professedly exhibits; and instead of "the power of godliness," there is frequently only "the form."

Reader, is Christ the foundation of *your* hope? O hearken to his voice; "I am the resurrection and the life; he that believeth in me, though he were dead, yet shall he live; and whosoever liveth and believeth in me shall never die!" On almost every Roman Catholic grave appears the inscription, "Priez pour le repos de son ame," "Pray for the repose of his (or her) soul!" But prayer for the dead is vain. Life is the time for prayer. If then you have never yet prayed, begin now—this day—this hour—this minute; and thus, by believing in Christ, you shall enter into rest."

TRACT DISTRIBUTION.

If we could ascertain what portion of the community feel any interest, or take any part in the circulation of Religious Tracts, we fear it would be found exceedingly small. Now, as we live in an age and country distinguished, above all others, for philanthropic liberality and exertions, there must surely be some very strong reason for the indifference that is manifested towards an undertaking which aims at accomplishing the highest of objects by means the most simple and least expensive.

We are well aware that there is no subject treated with such derision and scorn, by the men of the world, as the work now referred to; and, when we consider the powerful influence of "the world's dread laugh," we cannot doubt that this circumstance keeps back many of those persons, whose natural benevolence of temper would prompt them to take a part in any measure seeming to have such a beneficial tendency, and requiring so small a sacrifice of trouble, expense, or time. But there is another class, whose higher principles of action place them beyond the sneer of the scorner—who view the poor and the wretched as our Lord's representatives upon earth—and who deeply feel the great duty of ministering to their wants, both temporal and spiritual. Even of this class, however, the great majority make little use of religious tracts; and we can conceive no other reason for this but the conviction that such are not calculated to do any good. We have never once heard it alleged that they can do any harm; and we are, therefore, led to the conclusion, that the great obstacle to extensive tract circulation, is the impression that it is all "labour in vain." And truly to those who know the constitution of the human mind, this will seem obstacle enough; for, take away all hope of success in any enterprise, and the moving power of man's activity vanishes.

In combating the opinion that the distribution of tracts is all labour in vain, we might adduce the numerous instances to the contrary which are quoted from time to time in the various religious periodicals; and some of which are so well authenticated, as to afford unexceptionable testimony upon the point in question. But as this might seem in a manner begging the question, we shall take more general ground, and rest our argument upon the intrinsic nature of religious tracts relatively to the purposes for which they are intended. Let any one, therefore, examine a varied assortment of evangelical tracts, and he will find amongst them, some that are suited to awaken and alarm; others, to

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enlighten and instruct; to convince and convert; to direct and guide; to encourage and strengthen; to comfort and build up. In short, he will find the doctrines, duties, and hopes of the Bible set forth, both by precept and example, in all those varied forms which seem best calculated to attract the attention, and suit the understanding of a mixed multitude of poor, ignorant, careless sinners, many of whom may be accessible in this way, and in no other.

Here, then, on the one hand, are millions of our fellow-creatures perishing for lack of spiritual food; and on the other hand, here is an abundant supply of the bread of life, prepared according to the unerring standard of God's own word, and made up in such portions as to suit every variety of circumstance and capacity. And can it admit of a question, whether it be our duty to employ the means thus placed within our reach; and, which, to say the least, have such an evident tendency to answer the great end in view?

The instances of failure, we grant, will be numerous, very numerous; but let the degree of success be estimated at any proportion, however small, still there may be found abundant encouragement for perseverance in such a cause. For if we never can be sure of any individual tract accomplishing the desired end, neither can we ever be sure of its failing to do so; and the very possibility which thus attaches to every single tract, that *it* may be the favoured one which the influence of the Holy Spirit is to render effectual for turning some poor wanderer to the Shepherd and Bishop of souls, may well excite an unceasing feeling of interest throughout the whole system of tract circulation. During the seemingly least eventful day that passes over us, if one tract has gone from our hands, it may prove the means of leading some careless sinner to a saving knowledge of the truth as it is in Jesus, and thus render that day most memorable both to him and to us throughout eternity. The celebrated exclamation, "I have lost a day!" need never, therefore, be adopted by a tract distributor.

But we can place our present argument upon a broader foundation even than this; for we shall suppose the extreme case of a person who has devoted the greater part of a lifetime to the distribution of religious tracts, without having succeeded in a single instance in doing any good. Should it then be asked, in reference to such a case, Is not this labour in vain? we would say, in reply, Far from it: for although the eternal salvation of the human soul be an object of such unspeakable importance, it is not the whole, or the chief part of the object for which we were created. The glory of Almighty God must ever go first, and be paramount to every thing else; and if that can be in aught or in anywise promoted, the chief purpose of existence is answered.

Now it is not difficult to show, that God may be truly glorified by unceasing, although unsuccessful attempts to advance the kingdom of the Redeemer: nay, we would say that, in one respect, He is even more glorified in such a case than when success is evident and abundant; for really we scarcely thank the man for not becoming weary in well-doing, whose labours are continually cheered and rewarded by prosperous results, which ever tend so powerfully to foster our besetting sins of self-complacency and presumption. But when the faithful servant of Christ is enabled to bear up, year after year, against all the despondencies of fruitless exertion, from the conviction that it is his duty to persevere in planting or in watering, according to his means, whilst God alone may give or withhold the increase, he is much more likely to possess that temper of mind, which is suitable to a dependent and subordinate agent, and to commit his way unto the Lord, believing and trusting that He who alone knows what is best, will assuredly bring that to pass, in his own good time, and not till then; in his own good way, and in no other.

Such a person, being convinced that Divine truth is the grand instrument for the conversion of sinners; and seeing so many opportunities and facilities for employing this instrument in the form of religious tracts, has no doubt whatever, about the duty of diligently using these means, although it is the blessing of God alone that can render them in anywise effectual.

We must here explain, that the general term, "Religious Tract," which we have employed throughout, should now be taken in a more extensive sense than is commonly attached to it; for, among the publications of the Religious Tract Society, there will be found much interesting information, and im-

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portant instruction, regarding that beautiful and bountiful creation which is above us, and around us, and within us; much regarding the wonderful ways of Providence, as exemplified in the mightiest kingdoms, and the humblest individuals; and much, especially, regarding that marvellous scheme by which redeemed sinners may call the Almighty Maker and Governor of the universe their God and Father. Such are the themes treated of in the publications referred to; and of these there is now so great variety, both in size and substance, as to suit all ages, circumstances, and capacities, from the tract costing a farthing or less, to the book of considerable contents but small price.

Whilst such great and praiseworthy efforts are making for the improvement and extension of education among the industrious classes, it must surely seem of the utmost importance to provide some means for continuing and following up the intellectual and moral cultivation at that most critical period, when these young persons shall have quitted school. Many of the books now referred to are admirably adapted for this purpose, and it is one of the great advantages of the present day, that they can be furnished so cheaply, and in such variety. Sure we are, that persons who have the means, cannot better bestow a portion of them, than by keeping their respective neighbourhoods abundantly supplied with such safe and useful reading.—*From the Report of the Perthshire Religious Tract Society, Dec.* 1837.

THE ROCK IN HOREB.

As the Israelites in the wilderness thirsted for water, and murmured because of their distress, "the Lord said unto Moses: Go on before the people, and take with thee of the elders of Israel; and thy rod wherewith thou smotest the river, take in thine hand, and go. Behold, I will stand before thee there upon the rock in Horeb; and thou shalt smite the rock, and there shall come water out of it, that the people may drink. And Moses did so in the sight of the elders of Israel," Exod. xvii. 5, 6.

This fact reminds us that Jehovah is the God of *providence*, working even miracles for the accomplishment of his purposes; while the great apostle of the Gentiles directs us to Jehovah as the God of *grace*, when pointing to it, he exclaims, "That rock was Christ!" As he was prefigured by the manna, the brazen serpent, and the paschal lamb, so here it is manifest we have a type of Jesus, the great and only Redeemer.

The rock in Horeb, for instance, was *Divinely appointed* as the medium of relief; and so it is written, "Herein is love, not that we loved God, but that he loved us, and sent his Son to be the propitiation for our sins." And hence, to conceive of the moral Governor of the universe as merely intent on taking vengeance, is exceedingly derogatory to the Divine character, since Jehovah is the possessor of infinite excellence. Nor is it less obvious that to do so is awfully injurious; for its effect is to produce despair under a sense of guilt, instead of producing hope. The gospel is a proclamation of "good-will to men;" it is intended to "draw all men" to Christ; it therefore announces the glorious truth that "God is love," and exhibits an unparalleled display of benevolence in his "unspeakable gift."

Again, the rock in Horeb was *smitten*. It was only when struck by the rod of Moses, that refreshing streams issued forth; and so Jesus was "stricken, smitten of God, and afflicted," that he might bear our sins, and carry our sorrows. And what mind can conceive the agony he endured? For it is not enough to dwell on the weariness, the hunger, or the thirst of the Saviour; no, nor on the assaults of Herod's soldiery, the scourging of Pilate's hall, or on the anguish of his frame when suspended on the cross. The body of Christ was indeed smitten; but his *soul*—his soul unspeakably surpassing in its capacity of suffering all the sensibility of the body—"was made an offering for sin." "The spirit of a man will sustain his infirmity; but a wounded spirit who can bear?" Yet the spirit of Christ was wounded when, while "his sweat was as it were great drops of blood falling down to the ground," he exclaimed, "My soul is exceeding sorrowful, even unto death;" and the sorrow of that soul reached its utmost intensity when, as the Sun of consolation was completely eclipsed, the cry rent the air: "My God, my God, why hast thou forsaken me?" The cup, placed by the Father in the hand of Jesus, could not pass from him. It was for him to drink it even to the dregs. Had Christ failed

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to suffer and to die, the whole human family must have been eternally condemned. Salvation could alone be obtained at the inestimable cost of the precious blood, and of the soul's travail of the spotless Lamb of God. "For it became him, for whom are all things, and by whom are all things, in bringing many sons unto glory, to make the Captain of their salvation perfect through sufferings," Heb. ii. 10.

Still further: the rock in Horeb *ministered to the deep necessity of the Israelites*. Suffering from want of water, they would soon have become the prey of death, had the privation continued. Every sinner against God appears in similar circumstances. He is emphatically "ready to perish;" for "he that believeth not is condemned already;" and "on him abideth the wrath of God!" As then the Israelites beheld the streams gushing forth from the smitten rock with lively joy, so this should be excited by "the faithful saying, which is worthy of all acceptation, that Jesus Christ came into the world to save sinners." "He is able to save to the uttermost." "There is now no condemnation to them which are in Christ Jesus." For whenever the sinner is led, by the grace of God, to renounce all human hope of deliverance, and to trust exclusively and entirely in the great Redeemer, then he becomes, by this faith in the testimony of God, united to Him who is "worthy to receive power, and riches, and wisdom, and strength, and honour, and glory, and blessing." If now the question is proposed, "Who is he that condemneth?" the answer is, "It is Christ that died!"

Moreover, as the Israelites experienced the cleansing power of these flowing streams, so he, who arrayed in the righteousness of Christ, stands accepted before God, who is of purer eyes than to look upon iniquity, is also "renewed in the spirit of his mind." The approving smile of Jehovah arrays the countenance of "a new creature." Jesus came by water and by blood; by water to cleanse, as well as by blood to atone. The work of Christ *for* us, is connected with the work of the Spirit *in* us. Were man left the slave of unsubdued passions, he would writhe under their bondage, and be unfitted for the society and services of heaven. It is because renewal is connected with acceptance that salvation is complete. Hence the declaration of the apostle: "According to his mercy he saved us, by the washing of regeneration, and renewing of the Holy Ghost; which he shed on us abundantly through Jesus Christ our Saviour," Titus iii. 5, 6.

Here then is a test to which each one who reads this page may bring himself. Is there in the heart, it may be asked, the dominion of sin? Does the life bear witness to its ascendency?—Then the appalling fact is as manifest as if a hand like that which wrote on the wall of Belshazzar's palace, inscribed before the eye in characters of light, "Sinner! thou art condemned!" And if this be the case, oh that the charge may now be obeyed: "Look unto me, and be ye saved: for I am God, and there is none else." On beholding Jesus with the eye of faith, eternal salvation depends. To those who believe in him, and seek to be conformed to his image, salvation is as certain as if the mysterious volume could be opened, and their names read in "the Lamb's book of life."

CHINESE PORCELAIN IN EGYPT.

The researches of antiquarians are often attended with considerable uncertainty, as the following extracts from two works lately published will show. Mr. Wilkinson, in his interesting work on the Manners and Customs of the Ancient Egyptians, says:—

"Among the many bottles found in the tombs of Thebes, none have excited greater curiosity and surprise than those of Chinese manufacture, presenting inscriptions in that language. The accidental discovery of a single bottle of this kind would naturally pass unheeded, and if we felt surprised that it should be deposited in an Egyptian sepulchre, conjecture would reasonably suggest that an accidental visitor in later times might have dropped it there, while searching for ancient treasures of a more valuable kind. But this explanation ceases to be admissible, when we find the same have been discovered in various Theban tombs. I myself have seen several, two of which I brought to England; another is described by the learned professor Rossillini, and found by him "in a previously unopened tomb of uncertain date," which he refers, "from the style of the sculpture, to a Pharaonic period not

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much later than the eighteenth dynasty." (These kings are calculated to have reigned from B.C. 1575 to B.C. 1289.) A fourth is in the museum at Jersey, another was purchased by Lord Prudhoe at Coptos, and is now in the museum at Alnwick castle; two others are in the possession of Mrs. Bowen; and another belongs to Mr. W. Hamilton. They are about two inches in height: one side presents a flower, and the other an inscription, containing, according to the valuable authority of Mr. Davis, in three out of the eight, the following legend: "The flower opens, and lo! another year." The quality of these bottles is very inferior, and they appear to have been made before the manufacture of porcelain had attained the same degree of perfection in China as in after times; they were probably brought to Egypt through India, with which country I believe the Egyptians to have traded at a very remote period, and contained some precious ingredient, whose value may be inferred from the size of the vase. It cannot be supposed that the Egyptians, who manufactured porcelain of far better quality, would have sought or imported these as articles of value; we can therefore only suppose they were prized for their contents: and after they were exhausted, the valueless bottle was applied for the ordinary purpose of holding the *kohl* or collyrium used by the women for staining their eyelids."

Mr. Medhurst, on the contrary, in his valuable account of China, its state and prospects, notices these porcelain bottles in reference to the idea which has been held by some that the Chinese derived their mode of writing from Egypt, and says:—

"The notion of some connexion between China and Egypt (at a very early period) has been revived since two small porcelain bottles were brought from Egypt; on these, inscriptions have been discovered apparently in the Chinese character, and the learned have been curious to know their identity and import. A facsimile of one was seen by the author in China; and a picture of the other has appeared in 'Davis's Chinese,' but without any translation. On examination, it has been found that the inscriptions are in the Chinese running hand, and read as follows: "The returning spring brings about another year," and "The clear moon shines through the midst of the fir-tree." This latter sentence is part of a well-known couplet, composed by Wang-Gan-shih, a famous writer under the Sung dynasty, (A. D. 1068.) The original couplet ran thus:—

> "The clear moon sings in the middle of the fir-tree;
> The royal hound sleeps in the bosom of the flower!"

Soo-tung-po, another famous writer, about fifty-years afterwards, found fault with this couplet, and altered it to the following:—

> "The clear moon shines through the midst of the fir-tree;
> The royal hound sleeps under the shade of the flower!"

Travelling afterwards in the south of China, he heard a bird singing in the woods, and on inquiry found that they called it, "The clear moon;" and observing a grub nestling in a beautiful flower, he ascertained its name to be "The royal hound." He now became convinced of his mistake, but too late fully to repair the evil, as the couplet thus amended by him, had already been transcribed on various vessels, and transmitted, as we find, to distant Egypt. It will easily be seen they by no means strengthen the supposition of an early intercourse between China and Egypt; and so far from the bottles being coëval with Psammeticus (B. C. 658,) as has been suggested, its date cannot be older than A. D. 1130. Since the commencement of the Christian era, Chinese history mentions foreign merchants coming from India and Arabia by sea to trade with China. A. D. 850, two Arabian travellers came to Canton, who have published their itineraries; and A. D. 1300, Ibn Batuta visited China: so that intercourse has been kept up between China and Arabia, by which means the bottles in question may have been transmitted to the latter country, and from thence conveyed to Egypt. It does not appear that these bottles were discovered in an Egyptian tomb, which had not been opened since the days of the Pharaohs; for the travellers purchased them of a Fallah, who offered them for sale at Coptos. The inscriptions being in the running hand, which was not invented till the Sung dynasty, would lead us to conclude that the bottles are of a late date, and were, in all probability, carried to the west by Ibn Batuta."

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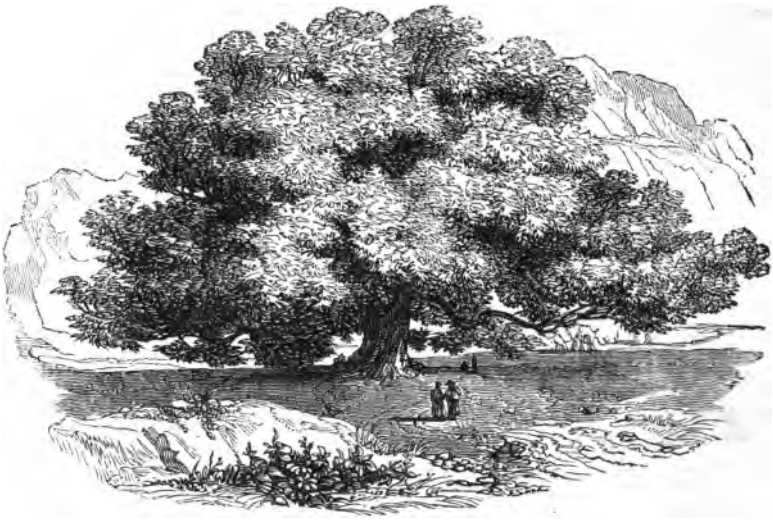

SYCAMORE TREE.

Ficus Sycamorus.

We have given a picture of the sycamore, as drawn in Salt's Travels; and to make our account instructive, we have added a representation of a branch with some of the figs upon it: see p. 442. This tree, consecrated and recommended to us by allusions to it in the sacred writings, has been long known to the curious; but even at this time dried specimens are so scarce, that they cannot be met with but in a few large collections. There is only one specimen in the British Museum, and that has not the fruit upon it. As recent specimens in fruit are not to be obtained, we have delineated, on p. 442, the fruit and flowers of the common fig, *Ficus carica*, that the botanical student may have a correct idea of its mode of flowering. The generic characters of the *Ficus* consist in having a common receptacle, globular, fleshy, concave, and closed with several scales at the orifice. This receptacle, as it is called, is, in our opinion, an involucre, or a collection of leaves proceeding from one point, which, cohering together and becoming fleshy, form a hollow globe, or oblate spheroid. Within the globe, the flowers are ranged, the barren ones near the edge of the opening, the fruit-bearing ones occupy the rest of the inside. This involucre, or vessel containing the flowers, continues to increase in size till it has arrived at its appointed limit of magnitude, when, by the action of the sun's rays, the juices contained in them, with their proper vessels, are changed into a pulpy continuous mass. In the mean time, the flowers decay, and the seeds are matured, which, by the commixing with the pulpy increase, lose their separate and distinct positions. The *Perianth*, or *calyx*, is deeply three-cleft, with the clefts or divisions erect. Corolla none. Stamens three, with their filaments bristle-shaped. Anthers two-lobed. Pistil stunted rudiment only. In the fertile flowers the calyx is in five divisions, which are deep and lance-shaped. Germen oval, filling up the calyx. Style, composed of a united pair of styles, which separate and end in awl-shaped stigmas. Seed, one to each fertile flower, of a compressed or flattened form.

The sycamore is a large tree, with leaves resembling those of the mulberry, whence the appellation, which imports a mulberry fig. It is a native of the Levant, Palestine, and Egypt. The stem is often fifty feet in thickness; and as it spreads forth its boughs far and wide, it affords a refreshing shade in the sultry climes where it grows. The wood is of a durable nature, and furnishes material for the fabrication of mummy cases. The fruit is produced from the trunk and larger

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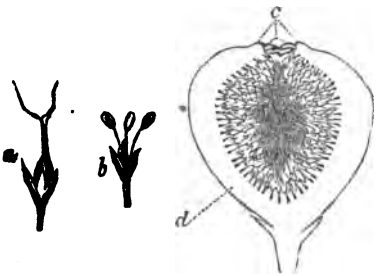
branches, and is pierced by a gall-fly a little before it ripens, which either enters at the orifice described above, or at a gangrenous wound, to which the fruit is liable. It possesses an agreeable, sweetish taste, with a slight degree of

Branch of Sycamore Tree.

aromatic flavour. At the end of March it buds, and ripens its fruit by the beginning of June. Theophrastus tells us,



Ficus Carica.

a. Germen and Pistil.
b. Stamen.
d. Section of the Fruit, showing the Stamens and Pistils enclosed in the interior.
c. The opening by which the interior of the fruit communicates with the atmosphere.

and Pliny after him, that the fruit will not ripen unless it be wounded, or scraped with iron nails; an operation which is performed, we see, by the cynipes, or gall-flies. The inhabitants of Lower Egypt, Hasselquist informs us, wound or cut the tree at the time of budding; for without this precaution they say it will not bear fruit. This is done to prevent a superabundance of sap, and the effect is perhaps the same, whether the fruit be scratched four days before it is expected to ripen, or at the time of budding. That the excess of circulating juice hinders the formation of fruit, is a matter very well known among gardeners. We may guess that Amos, who styles himself a scraper of sycamore trees, ch. vii. 14, puts a part for the whole, and implies that he was an husbandman, and probably a skilful man in his calling.

ROSE AND CROWN LANE:

OR,

A SKETCH OF MY NEIGHBOURHOOD.—No. XI.

(*Conclusion.*)

By some philosophers man has been distinguished as a reflecting animal—one that looks backwards and forwards. It can scarcely be established that this is the prerogative of man alone; for the more sagacious of the brute creation (the dog, the horse, the elephant) certainly possess the power of recollection and association: they have a knowledge of the persons by whom, and the circumstances under which they have been either gratified, injured, or punished; and they will plainly discover this knowledge, if brought again into contact with the same persons or scenes, or into similar circumstances.

A moral consciousness, however, certainly belongs to man alone, and distinguishes him from the inferior creatures. He alone is capable of regulating his conduct by moral rules, and of anticipating or tracing its consequences, and their agreement with certain fixed principles. Thus, he who has impoverished himself by extravagance, or he who has disordered his constitution by excess, feels conscious that in the poverty or disease under which he suffers, he reaps the natural and just consequences of his own folly. This is experience. A wise man—(for, despite of proverbs, a fool will not)—a wise man will learn by experience to avoid similar courses in future. Wiser still is the man who foresees the evil to which his courses tend, and forsakes the foolish way before the consequences of his error come upon him, and so escapes the mischief to which he had exposed himself. He is the wisest

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of all who is content to learn from the experience of others, and from the dictates of unerring wisdom—who is taught, and sees, and believes the way of good, without gaining his knowledge by the actual loss of good, and experience of evil. It is this kind of wisdom that we ought to derive from our observations of human character, and the methods of Divine Providence. Happy would the writer of these sketches be in indulging the hope that they might prove the means of leading some whose characters are here portrayed, to perceive and to forsake the errors by which their interests are endangered, if not sacrificed; happier still if any young beginners in domestic life should be directed and confirmed in choosing at first the good and the right way.

I have already disclaimed all knowledge of futurity beyond that which is gained by the application of scriptural principles to human conduct; but as I read in Scripture, that "the soul of the slothful desireth and hath nothing: but the hand of the diligent maketh rich;" that "the glutton and the drunkard shall come to poverty: and drowsiness shall clothe a man in rags;" and, in general, that "it shall be well with the righteous, but it shall not be well with the wicked;" it is not very difficult to imagine what may be the future condition of families, according to their present conduct.

Retracing, then, my neighbourhood, and beginning at No. 1, I remark, that the dirty, indolent habits of Mr. and Mrs. Perkins, and their family, naturally tend to disease and poverty. I should not, therefore, be surprised, in case of any epidemic disorder breaking out in the neighbourhood, if several of its victims should be taken from this family; indeed, it would be a wonder if they should escape. Perhaps one or both of the parents may be cut off in early life, and leave their family altogether dependent on the parish. Should they escape a visitation of this kind, what is more likely than that John Perkins's habits of intemperance should bring on him palsy or consumption, by which he would be reduced to helplessness, or brought to an early grave? Then, against an attack, whether of sudden or lingering sickness, they have made no provision, possess no comforts, no resources. If such a trial should come upon them, it may be expected that they will get into debt, part with their few articles of furniture, and sink into total wretchedness; perhaps occasionally receiving temporary relief from casual charity, but wearying out their benevolent friends, and at last taking refuge in the poor-house. The natural tendency of things is from bad to worse, from poverty and dirt to utter destitution; and, alas! the process of moral deterioration goes on with equal certainty and velocity. I tremble when I think to what depths of vice and irreligion these unhappy people may then be plunged; how much further they may have wandered from God, and how totally destitute they may find themselves of any solace and support in the time of their worldly distress; how ignorant of, or how hardened against the only way of salvation, the only foundation that can sustain a sinner in the hour of death, and in the prospect of standing before God in judgment. I know of one means, and only one, by which this melancholy issue may be averted—one which would effectually better the condition of my poor unhappy neighbours, which would bring order and comfort into their dwelling, and peace and satisfaction into their minds. It is the transforming influence of the grace of God, which, bringing salvation, teaches to deny ungodliness, and worldly lusts, and to live soberly, righteously, and godly in the world.

My neighbours are parents, and I cannot but anticipate with grief the influence of parental example on their numerous family, and its probable effect both on their future characters and circumstances. What will these children be a few years hence? if matters go on in their present course, perhaps something like the following. Brought up in habits of dirt and indolence, rude and coarse in their manners, total strangers to self-respect, industry, thrift, and propriety of behaviour, they possess none of the elements of rising in life. Should they become apprentices, they will be awkward, slovenly, and careless in their work. If they seek situations in domestic service, they will be unfit to enter respectable families, and must put up with the very lowest and most undesirable situations; indeed, no decent person, however humble their circumstances, who can keep a servant at all, would like to put up with one of dirty, careless habits. Besides, dirty habits are frequently connected with, or lead to vicious habits. No reliance can be placed on the virtue of a young person who is a stranger to self-respect. Then, too, the

young Perkinses have been trained at home in the practice of deceit. They have been taught to make a false excuse to the master for the absence of their father from work, and to offer false pleas to gain the assistance of the charitable; and they have sometimes seen these tricks succeed. Lessons of deceit are never forgotten. When these young people have ends of their own to answer, or faults to conceal, their mother's expedient will be sure to present itself; the practice will become habitual; the confidence of employers will soon be lost, and they will know the wretchedness of having to seek a living without a character. Then they are growing up without dutiful regard to their parents, and without family attachments among themselves. When these dispositions are not cultivated in childhood, they rarely come into operation in riper years; and there is little reason to hope that the members of this family, under any circumstance, will prove a help and solace to one another. As they advance in life, and form new family connexions, it is to be feared that they will but multiply and perpetuate vice and wretchedness to future generations. In a word, it is an unhappy family, and there is no prospect whatever of its ever being otherwise, except by a total change of disposition, character, and course.

The probable course of the family at next door presents a very different aspect, yet by no means of so promising and satisfactory a kind as it might be if industry and cleanliness were improved by godliness, and authority regulated by principle, and temper sweetened by grace. The little Browns will in all probability prove active, industrious, and intelligent, and rise many degrees above their neighbours. It can scarcely be imagined that they should ever become helpless dawdles, and willing to sit down contentedly in dirt and wretchedness. No, they will most likely have a spirit of emulation; they will have an aptitude for acquiring property, and preserving it. From mere habit, they will be thrifty and careful in managing the property of others, and will take a pleasure in keeping things in order. Hence they will be useful servants, and likely to gain good situations; but their tempers will probably prove a drawback on their other excellences. They will probably be pert, saucy, and overbearing; spurning at reproof, soon put out of the way, not easily conforming themselves to circumstances; cross to the children of the family, and quarrelsome with fellow-servants; perhaps not only cleanly, but idolizing cleanliness, and grudging that the articles in whose brightness they delight, should be taken down for any useful purpose. Observe, I do not say that it will be so; I do not set myself up for a prophet: I merely remark that the manner in which these children are trained at home, is likely to form them to such tempers and habits. I have seen several instances in which similar treatment has produced such results, and therefore I think it probable in the present instance; and I mention the probability, that in case my remarks should meet the eye of Mrs. Brown, or any other mother who adopts like methods with her children, she may be induced to inquire whether her plans are not susceptible of improvement. If among Mrs. Brown's family there should be one child of a timid disposition, its temper will probably be injured by finding it impossible to please. It will become disheartened and degraded, indolent and useless; for it is not likely to meet with sympathy or encouragement from the more energetic members of the family, who have not been taught to bear one another's burdens. It will be as a speckled bird among them—despised, and perhaps deserted by the rest. Family alienation is a frequent consequence of holding in too high and exclusive esteem the ability to get and keep the good things of this life. It is well to aim at excellence in all we do, and to promote and encourage the same spirit in those around us; but if once we begin to value ourselves upon our capabilities and acquirements, otherwise than as they are the means of usefulness, they are very likely to become instruments of evil rather than of good.

Brown's family, I should think, are very likely to rise in life: industry and frugality, a good education, and a notion of making the best of it, are among the ordinary elements of worldly prosperity. It will be strange if these children should not grow up with an aptitude to turn their hand to any thing, a spirit of diligence and perseverance, and a notion of taking care of a little property, and turning it to a good account in the accumulation of more. It would not at all surprise me to hear, a few years hence, of some of them being flourishing tradesmen. Many instances

have occurred of lads, who began life in no higher circumstances than the young Browns, rising to affluence. The great danger is of a spirit of pride and worldly-mindedness, an eager pursuit after wealth, and valuing themselves on their possessions, while God is not in all their thoughts.

I have seen some instances of young people brought up like this family, who became very careful and frugal, perhaps parsimonious in general, yet who indulged some one expensive foible, by which, in spite of all their industry and frugality in other matters, they were kept poor. Fine tea, fine lace, fine horses, fine pictures, are among the selfish hobbies of this kind of people, who in every thing else grudge themselves and those around them the comforts and almost the necessaries of life. They are among the most disagreeable people with whom to form a family connexion. I do not say that my neighbours' children will exactly answer to any of the characters that I have described; but I do not hesitate to affirm in general, that the system of education pursued has a strong tendency to make them selfish in some way or other; and selfishness in all its varied forms is the sure bane of domestic happiness and social cheerfulness. But I have spoken first of the children; and what may be anticipated for the parents? Well, I really do not know enough of Mr. Brown to judge what may be his internal resources; what provision he has made for the evening of old age, when the heat and burden of the day of active life have passed by, and man is in a sense compelled to look within himself for his enjoyments; but from what I know of his wife, I can form some idea what kind of an old age she is likely to pass, unless indeed some great and favourable change in her views and disposition should introduce her to sources of enjoyment to which she is now, I fear, a total stranger.

It is by no means certain that they will live to old age; but habits of industry and temperance are favourable to health and longevity; it is, therefore, probable that they may attain to that period of human existence from which so many are cut off by their own vices and follies.

I can suppose Mrs. Brown's domestic cares greatly reduced; her children having grown up, and gone forth to provide for themselves. Yet I can fancy that her active disposition will not allow her to take repose from toils now no longer necessary. I can imagine that she will still take in her washing, and her needlework, and look as carefully after every penny as when it was needed for the support of her young family. I can suppose a comfortable provision laid up for her old age, and that she is still toiling, and urging her husband to toil, to add to it, and quite afraid to venture upon enjoying any part of it, or to slacken her exertions for this world, and turn her attention to another. From her long habit of scolding, I should fear that when her children have grown up and left her, she will continue to vent her scolding on her husband, and so imbitter the repose they might enjoy. When the infirmities of age come upon her, I should fear that she would be fretful, and peevish, and impatient under suffering; having no love for religion, no taste for reading, and finding leisure a weariness and burden.

I cannot help on this occasion remarking, that all the struggles which can be made amidst the labour and bustle of providing for and managing a family, to secure the observance of the Sabbath, and the enjoyment of religious privileges, are abundantly requited in the capability acquired, and the sources opened for the enjoyment and improvement of the leisure of old age. Oh that my neighbour might be led now to cultivate an acquaintance with those sacred truths and holy influences which would refresh her mind and sweeten her spirit amidst the passing cares of life, and which would afford her solace and support in the period when heart and flesh fail. But if it should not be so, if she should still go on toiling, and amassing for this world, and careless of another, what can be expected, as the result of all her labour, but "vanity and vexation of spirit," weariness and dissatisfaction in this life, and no heart-cheering, soul-sustaining hope for another? When we are eager in the pursuit of worldly good, how desirable is it that we should accustom ourselves to look beyond earth and time, and be concerned about the interests of eternity; else, whatever success may attend our worldly schemes, we are continually liable to the startling summons, "Thou fool, this night thy soul shall be required of thee: then whose shall those things be, which thou hast provided?" Or, if living to old age without God in the

world, we shall find that they are evil days, and years in which there is no pleasure.

And shall I make remarks on the characters and prospects of my neighbours, and pass by my own dwelling or my own hopes, without examination? "Search me, O God, and know my heart; try me, and know my thoughts, and see if there be any wicked way in me, and lead me in the way everlasting." Suffer me not to disgrace thy name, or to be a blot or a blank in life, but enable me in some humble way to honour thee, and lead a life of usefulness. Guide me by thy counsel, and when heart and flesh fail, be thou the strength of my heart, and my portion for ever!

And what are my anticipations for my excellent neighbour and her interesting charge at No. 4? In her case, a long course of consistent piety encourages the belief that at eventide it will be light. I trust her season of active usefulness may be protracted, that she may continue to a distant period to diffuse knowledge and happiness around her; that she may long enjoy the dutiful and affectionate attentions of the child she has so tenderly cherished, the gratitude of the poor, and the respect of all around her. I can easily imagine the dear girl filling some honourable and useful station in life for which her grandmother's instructions and example have tended to qualify her; perhaps laudably exerting herself for her own support, and exercising frugality and self-denial in her own expenses, that she may enjoy the grateful satisfaction of, in some degree, requiting the kindness of her venerated parent and benefactor; perhaps well connected in life, raised to affluence, and delighted to restore her aged relative to the enjoyment of her accustomed comforts. I can indulge the far more delightful hope—for already there are pleasing indications that she has remembered her Creator in the days of her youth, and that in her there is found some good thing towards the Lord God of Israel—that her steady, vigorous advancing piety will fulfil the warmest wishes and crown the conscientious efforts of the pious grandmother; and that in this respect the aged saint may be permitted to say, Lord, now let thou thy servant depart in peace, for mine eyes have seen thy salvation. I know not whether my estimable neighbour, as to outward circumstances, may to the close of life enjoy tranquillity and comfort, or whether new storms and trials may await her; but I feel a confident persuasion that her mind will be sustained and kept in perfect peace, being stayed upon God; that knowing to whom she has trusted that precious deposit, her immortal soul, and that He is able and faithful to preserve it against that day, she will not be greatly moved by the things of time, but will enjoy clear and lively views of eternity; and that in due time an abundant entrance will be ministered to her into the everlasting kingdom of our Lord and Saviour Jesus Christ. Oh what a blessed thing is true religion! how it sweetens, and sanctifies, and sustains, and ennobles its possessor in all circumstances and conditions. When, for ourselves or our friends, we can cherish a well-grounded hope of being interested in it, we may well dismiss all lesser anxieties, and say, "We know that all things work together for good to them that love God, to them who are the called according to his purpose." Surely goodness and mercy shall follow us all our days, and we shall dwell in the house of the Lord for ever.

But I must hasten along the Row. At No. 5, my anticipations are of a varied kind. In some respects I am sure that the practices of my neighbours are erroneous, and likely to lead to disastrous results. I fear that health may be sacrificed; I fear that a weak, sickly race of children may experience a short-lived and suffering existence, or be early deprived of parental care. I fear that no provision is made for the fluctuations of trade, or any interruptions of affliction, and that, by some of the various contingencies of human life, the family may be reduced to destitution. I fear lest insidious and dangerous habits should grow out of acts of inadvertent self-indulgence. Yet I hope: because these young people do not discover that inveterate spirit of prejudice and self-conceit which would shut the door against misgovernment; and because they attend the outward means of grace, and discover some degree of interest in the gospel, which is the power of God unto salvation to every one that believeth. May it prove so in their happy experience; and may they find that "the fear of the Lord is the beginning of wisdom!"

The numerous family at No. 6, that of Mr. West, the baker, will probably share the common vicissitudes of life, and be placed in various circumstances of health and sickness, prosperity and adversity; but there is good reason to conclude that

they are and will be happy in having chosen the one thing needful, which shall not be taken away from them. I fully expect that the family will prove dutiful and affectionate, because they have been brought up in that way on which the blessing of God usually rests. They have seen in their parents examples of consistent piety, and they have been committed, and taught to commit themselves in humble faith and prayer to Him "who never said to the seed of Jacob, Seek ye me, in vain."

When a family acknowledges God in all their ways, he certainly will direct their steps, and choose their inheritance for them. The prospects of the young people are encouraging. The parents exert themselves to procure for them a suitable education, and they are intelligent, industrious, well-inclined, and humble. The eldest boy discovers considerable mechanical ingenuity and perseverance; he is to be placed in a situation which will give scope for the employment and improvement of his talents and industry. I trust he will be preserved from the snares of the world, which especially beset the steps of a youth on his first quitting the parental roof; and that he and all his brothers and sisters will prove worthy of the parents from whom it is their honour to have descended. As to the parents, I feel fully confident that they will never see reason to repent of their conscientious sacrifices and honourable decision in religion. They will, I doubt not, continue to realize the blessedness of the man who feareth the Lord, who delighteth greatly in his commandments, and be enabled to say, that not one good thing has failed them of all that the Lord their God has spoken.

For the inconsistent professors of religion, what peace or prosperity can be anticipated? At No. 7 the prospect is dark and gloomy indeed. It were better for them not to have known the way of truth, than to have forsaken it and gone in the way of the wicked, when they know that the end thereof is death. Horrors of conscience must imbitter every enjoyment; or, what is more dreadful still, conscience may be stupified and seared by the very means appointed to enlighten and quicken it. The children of such a family must be expected to grow up vicious and profligate in no ordinary degree, and the parents sustain a double and fearful responsibility for forsaking the way of truth themselves, and for giving occasion to their children and others to speak evil of it. But,

> "While the lamp holds out to burn,
> The vilest sinner may return."

While there is life, there is hope; and oh that a gleam of heavenly mercy may dispel the gloom that hangs over the path of these wretched wanderers, and turn their feet into the way of peace, lest they should plunge into the blackness of darkness for ever!

Not more cheerful anticipations can be cherished for the family at No. 8. Ill-gotten gains never prosper. Those who by unjust gain increase their substance, find that their riches are corrupted, their garments moth-eaten; their silver and gold are cankered; they witness against them, and eat up their flesh as it were fire. I can suppose this family wretched in the midst of abundance, disappointed and thwarted in their expectations; and, after all their striving and toiling, find that they have obtained only broken cisterns which can yield no water; perpetually reproaching each other, and murmuring against God. I can suppose the ill-educated children alienated in affection from each other, and from their parents; pursuing their own ways, regardless of the feelings and interests of the rest; obtaining by fraud or struggle all they can of the family property, and grudging all that others receive. I can imagine the oppressed sons burning with resentment and malice, and the idolized daughter perverse, self-willed, and rebellious; imbittering the lives and breaking the hearts of her parents by a hasty marriage, or by disgraceful conduct—but I dare not pursue the gloomy foreboding. "Destruction and misery are in their ways, and the way of peace have they not known: there is no fear of God before their eyes." But oh may the wicked forsake their way, and the unrighteous their thoughts, and return unto the Lord, for he will have mercy upon them, and to our God, for he will abundantly pardon!

Fain would I hope that the pious inmate of this family might be made the honoured instrument of leading them to that Saviour who came to bless, by turning men away from their iniquities. For himself, anticipation is most cheering and delightful; for "the path of the just is as the shining light,

that shineth more and more unto the perfect day." A few more trials and struggles may await him; but faithful is He that hath called him; strength will be afforded equal to his days; and soon the days of his mourning will be ended.

"Cease, O pilgrim! cease to mourn;
Press onward to the prize.
Soon your Saviour will return
Triumphant in the skies.
Yet a season, and you know,
Happy entrance will be given;
All your sorrows left below,
And earth exchanged for heaven."

My apprehensions from the dame-school at No. 9, are rather for the pupils than the governess. I fear the system of education pursued will have an injurious tendency on the children, as leading them to act on false principles. I can fancy them in future life influenced by unworthy motives, or suffering from imaginary terrors, or setting up unjust claims upon others; all of which might be traced to the improper bias given at the dame-school. I hope the attention of parents will be roused to this important matter; and that they will consider that they cannot place their children at school *merely* to be out of the way, because the education of their principles and temper is inevitably going on, whether for good or for evil; and the lessons of the nursery and the infant-school will not be obliterated through future life.

For my honest neighbour, Widow Allen, I anticipate much happiness in the dutiful affection of her grateful children. I hope that she and they are living a life of devotedness to God, as well as of harmony together; and then I am sure they will testify, that happiness may be enjoyed in a cottage as well as in a palace; that a little that a righteous man hath is better than great riches of the wicked; that the fear of the Lord is true wisdom, and that in keeping his commandments there is great reward.

Reader, farewell: whether your lot and mine be cast in an humble Row, a solitary cottage, or a splendid square, may it be a habitation on which the blessing of the Lord shall rest! May we be looking for the mercy of our Lord Jesus Christ, and making preparation for dwelling in a house not made with hands, eternal in the heavens!

CHRIST'S INCARNATION THE MYSTERY OF GODLINESS.

It is an undoubted truth, that the perfections and glory of God the Father were manifested in the incarnation, life, and death of his only begotten Son. If, then, in one respect, they vailed the Divine glory; they gave, in another, a new and fuller view of its brightness. Never was there so striking and sensible a manifestation of the greatness and majesty of God, as when to do honour to God, his equal and fellow humbled himself and made himself of no reputation. Marvellous and astonishing event! The Creator takes into union with himself a creature, not of the highest rank and order, a spirit dwelling in a cottage of clay, nay, not the spirit only dwelling in flesh, but the flesh also; and this, not when the nature united to him was in its primitive glory, but when reduced to circumstances mean and wretched. He assumed a true body, subject to hunger, thirst, weariness, and other common sinless infirmities; and a reasonable soul, susceptible of fear, anger, sorrow, compassion, and every other innocent affection and passion of humanity. Do any ask, Why was all this? Let them consult the following scriptures: 1 Cor. xv. 21; Heb. ix. 28; ii. 14—17; 1 Cor. ii. 8. The splendour of God's majesty was too bright for mortals; it would have dazzled and blinded the eye, and struck the heart with insupportable astonishment and dread. The excellent glory must be so tempered, by vailing it with flesh, that men might endure its lustre, and without terror or alarm, converse freely with God. If, however, in some circumstances of Christ's incarnation, meanness and abasement appeared, in others, Divine majesty and greatness were manifested. Heaven and earth, angels and devils, kings and subjects, friends and enemies, united to do honour to his birth. God shakes the heavens and the earth, and shakes all nations, before the Desire of all nations comes, Hag. ii. 6, 7. A general expectation is raised of an illustrious and universal Monarch about to be born. At his birth, the oracles of the heathen become silent. Angels quit their native heavens, finding no transactions there, more worthy of their admiring thoughts, than those now commencing in our lower world. A new star appears to point out the incarnate God. The shepherds of

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Bethlehem, the wise men from the East, the venerable Simeon, and pious Anna, join their praises to those of the heavenly host, and talk, in rapturous strains, of the great things which the Child, born at Bethlehem, was about to accomplish. Let not, therefore, the incarnation of Christ, and the low, afflicted circumstances in which he appeared, be any stumbling-block to your faith. Beams of majesty, as the only begotten of the Father, darted through his outward meanness, sufficient to convince the attentive spectator. This outward condition well suited the ends of his mission, which was designed to expiate our guilt, and bless us in turning us away from our iniquities—not to conquer the Romans, and erect a temporal monarchy.—*Dr. John Erskine.*

SHIPS MISSING.

A FEW hours ago I was looking over "Lloyd's List" to obtain some nautical information, when my eyes fell upon the announcement under the head of "Ships Missing." A chilliness, a sickness of the heart came over me. "Ships Missing!" What an affecting announcement! how full of melancholy interest and intense anxiety!

The sailing of a ship excites hope, the arrival of a vessel calls forth joy, while the knowledge of a shipwreck occasions grief: these are all distinct and intelligible sensations; but what a mingling of painful emotions! What a forlorn hope, a fearful foreboding, and terrible suspense, does the announcement that a ship is "Missing" produce in the minds of those interested therein?

There are many terms used in "Lloyd's List" which are fearfully significant. They afford us a brief concentration of disasters; a kind of summing up of maritime calamities. Thus we have—"A ship went down behind the pier"—"A strange vessel foundered"—"No assistance could be given"—"Crew drowned"—"All on board lost." These are short items, but how much of varied and intense suffering do they set forth!

Have you ever seen a merchant ship leaving harbour, with a fair breeze filling her sails; or entering the port with a goodly freight? Do you know aught of the pleasures or the dangers of the deep? Have you felt the delight of dashing through the dark blue waters with a favourable gale? or experienced the terror of the angry tempest, when the masts have gone by the board; the bulwarks and quarters been broken in, and the storm-beaten vessel, with parting timbers and six feet water in the hold, has laboured hard in the trough of the sea,

> "One wide water all around her,
> All above her one black sky."

If you know all, or any of these things, you will not churlishly refuse to ponder the page that makes "Missing Ships" the subject of its remarks.

In the days of my youth, a friend that was dear to me set sail for Newfoundland. We had been school-fellows, and the bonds of friendship and affection that bound us together were strong; how did I yearn for his safe arrival! but I will be brief. The ship in which he sailed was not sea-worthy; twenty-five years have rolled by, yet never have I heard aught of the "Nancy," but this, that she was among the ships that were "Missing." Since then what scenes of desperate pirates, and cruel bondage, and desert isles, and sharp pointed rocks, and storms and shipwrecks, and drowning sailors, has my imagination drawn. How often in my fancy has my friend sprang forward, clad in the wretched attire of a broken-down seaman, to meet the grasp of my extended hand!

When a vessel has been wrecked, whatever may be the loss of cargo and life, distressing as the intelligence may be, a time comes when the tears of sorrow cease to fall, and the heart learns to be reconciled to its bereavement. There is a merciful provision in human cares, whereby, like the ocean waves, one swallows up another; but when does the time arrive that the announcement, "Ships Missing," can be read without a pang by those whom it concerns? It is full twenty-five years since the "Nancy" should have returned, and even now my eyes are brimming.

I am giving but a melancholy signification to the term "Ships Missing," but certainly not a more melancholy one than the case requires. I want to excite sympathy towards sailors; their courage and their usefulness, their dangers and their deprivations, alike deserve it. We owe them much; much ought we to repay.

Let us suppose that we have relations

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and friends among the sailors of a missing ship: we will call her the Rover.

> "She widely spread her snowy wing,
> Like the sea-gull of the ocean,
> And shaped her way, like a living thing,
> Of graceful form and motion."

But the time of her arrival is gone by: days, weeks, and months have passed, and no tidings have been received. She is still "Missing." She may have been blown by stress of weather to the north or south, to the east or west; but of this we know nothing. All is uncertainty, doubt, and fearful apprehension. One thing only we know, and that one thing we know too well, the ship is "Missing."

By and by comes a rumour of a wreck off Antigua in the West Indies. A squall caught the ship, when she could not clear the rocky head-land that stretched out far into the sea. She struck upon the rock, her rudder was torn away, her sails rent, her masts carried over, and the wild waters made a clear sea over her shattered hull.

Night came on, and the exhausted crew looked up hopelessly at the lowering sky, that poured down a deluge of rain on their heads. Some tried to get ashore by their boats, but these were swamped, and went down with their crews. Another day came, and another night. One by one had the mariners been washed from the wreck, till a few only were left. At last the timbers gave way, the vessel parted at mid-ships, a wild cry was heard, and she was swallowed up by the wide yawning deep. One sailor only was flung alive on the rocky headland, to tell the fearful news of the shipwrecked vessel. Was this ship the Rover? No! but she may have shared a like disaster.

Next comes a newspaper fraught with sad intelligence. A gallant ship has been lost amid the icebergs of the north. She was hurried through Davis' Straits, and got frozen up in Baffin's Bay. The crew caught a few seals, and these eked out their scanty stock of provision. They then took a white bear and a walrus, but things grew worse and worse. Their sufferings were dreadful in that inhospitable clime. Almost famished, they made great exertions, sawed their way through the ice, and forced a passage through the floes; but a strong current carried the ship, when she was disabled, between two large drifting icebergs, which fast approached each other. It was a dreadful moment when they met; for the ship was between them, and her timbers were crushed as though they had been paper. One seaman only escaped, and he miraculously, to recount the loss of his companions. Think not that this vessel was the Rover. No! she has never been heard of; but who shall say that she did not founder amid the icebergs of the north?

Now come advices from abroad, a British merchantman has been boarded by pirates and captured. The cargo was taken away, the crew murdered, and the vessel scuttled. Surely this was not the Rover? No, the Rover yet is "Missing." She may have been scuttled, her cargo taken, and her crew murdered. Fearful thought! but we cannot tell how the case may be. We only know that she is yet "Missing." Perhaps the next source of fearful information is the mate of a whaler, who says that when blown about by tempestuous weather among the South Sea Islands, they saw a merchant ship, which had struck on the rocks, boarded by savages in their canoes; these he believed to be cannibals, and he fears the crew must all have fallen under their spears. The Rover is yet "Missing;" what if she be the ship the mate has described!

Now comes a private letter from a captain cruizing off Coromandel, relating the lamentable occurrence of a ship, struck by lightning, and burned to the water's edge. The captain saw her when she was first struck, and stood towards her, but the weather was too rough to render her assistance. The consternation of the crew was terrible; what with the tempest, and the heaving ocean, and the fire, they seemed distracted. The flames ran up the rigging, the blazing masts fell over the gunwale, the fire reached the powder room, the vessel blew up with a tremendous explosion, and not one of the crew escaped destruction. Is it possible that this vessel could be the Rover! Very possible: the thought is horrible, but we know no more. The Rover is still among the "Missing."

> The ROVER is *missing!* her mariners sleep,
> As we fear, in the depths of the fathomless deep;
> And no tidings shall tell if their death-grapple came
> By disease, or by famine, by flood, or by flame.
> The storm-beaten billows that ceaselessly roll,
> Shall hide them for ever from mortal control;
> And their tale be untold, and their history unread,
> Till the dark caves of ocean shall give up their dead.

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Perhaps you have paused and pondered, as well as I, on the announcement, "Ships Missing;" and you may have clothed the term with yet more melancholy significance than my pen has attached to it; but do you feel real sympathy for the sons of the ocean who breathe in storms and in almost perpetual danger? With only a plank between them and a watery grave, they "go down to the sea in ships, and do business in great waters." The winds that waft them to their desired haven may blow them on the rugged rock; the waves that bear them on their course may overwhelm them with destruction. Disease and war, and desperate hunger and raging thirst, and tempests, and lightning, and shipwreck, are ever in their track. One hour becalmed on a glassy sea, and another dashed headlong forward by the raging storm.

"Mid dangerous shoals the sea-toss'd bark is borne,
By tempest shaken, and by lightnings torn;
While free'd from harm, perils are ever nigh,
Death's shaft flies near her, *if* it passes by."

How great our obligations to sailors! They have dared every danger, taken abroad our manufactures, brought back the produce and the riches of other lands. They have been our bulwarks in the battle, the convoy of the missionary to other lands, and the guardian of the Holy Scriptures, bearing them in safety across the wide world of waters. These things have been done, and have we repaid them? "We are verily guilty concerning our brother."

We have seen that there is "but a step between him and death;" yet we have not instructed him to seek eternal life. We have commended his bravery, laughed at his follies, and tolerated his guilty excesses; but have we warned him of his danger, added to his true comfort, and sought his everlasting good? Tell me not that there are societies for the sailors, books, and ship libraries, and other advantages for these brave men. I know this; but I know also that what has been done, compared with what ought to have been done, is but as a drop to the mighty ocean. A fraction only of the debt we owe has been paid.

Look again at the sailor in his dangers. I speak not now of the dangers of the deep, nor the perils of battle. You may bid me look at Greenwich Hospital if you will, and tell me that it is a noble institution, a princely asylum for disabled seamen, those thunderbolts of war! Care has assuredly been taken to protect the mariners of king's ships from the evils of poverty; but when was the arm of the nation raised to protect the sailor from himself?

See him, with weak judgment and strong passions, approach his native land! Girt around with temptations, with an uninstructed mind, and no principle to guard and guide him, he falls into the hands of the spoiler. "He goeth as an ox to the slaughter, or as a fool to the correction of the stocks." He is permitted to be the victim of the cruel, the rapacious, and the abandoned, who devour his substance and "hunt for the precious life;" he drinks in iniquity like water; he is robbed alike of his money and his raiment, and is flung forth a degraded and penniless outcast, to beg or to starve.

Many years ago, a friend of mine put into my hand a letter written to him by Admiral Nelson, wherein, speaking of sailors, the Admiral quoted these lines:

"God, and our sailor, we alike adore
In times of fear and danger, not before:
The danger o'er, both are alike requited,
God is forgotten, and the sailor slighted."

And truly there is much point and truth in the quotation. What has been done for the sailor is creditable to the doers, but will not excuse you and me. To our reproach will it be, if we find not out some means to do them good. I shall have sadly missed my object in noting down these feeble remarks on "Missing Ships," if I have not moved you to think more kindly of seamen, and worked up your philanthropy to some practical expression of good-will to sailors.

M.

TROUBLES.

We are prone to look at our troubles through a magnifying glass, and all our mercies through a diminishing one. Hence we are so miserable under present distress, and so ungrateful for past favours.—*Mason.*

CHRISTIANITY.

It was not by inflicting pains and penalties, that Christianity first made its way in the world. The divine truths it inculcated received irresistible confirmation from the lives, practices, and examples of its venerable professors.—*H. More.*

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DECEMBER FLOWERS AND PLANTS.

Plants in Flower.

WILD.	CULTIVATED.
Groundsel, *Senecio vulgaris*	Christmas rose, *Heleborus niger*
Shepherd's purse, *Capsella Bursa Pastoris*	Snow-drop, *Galanthus nivalis*
Chickweed, *Alsine media*	China rose, *Rosa Indica*
Dandelion, *Leontodon Taraxacum*	Garden anemone, *Anemone hortensis*
Field daisy, *Bellis perennis*	Chinese primrose, *Primula Sinensis*
Primrose, *Primula veris*	Japan corchorus, *Kerria Japonica*
Nipplewort, *Lapsana communis*	Sweet violet, *Viola odorata*
Bear's foot, *Helleborus fœtidus*	Levant heath, *Erica Mediterranea*
Field speedwell, *Veronica arvensis*	Japan Allspice, *Chimonanthes fragrans*
Red dead nettle, *Lamium purpureum*	Cape aletris, *Tritonia uvaria.*

Another year is rapidly departing. The wheeling earth, ceaseless in its revolutions, is approaching to its perihelion, or point nearest to the sun; when the day is at the shortest, and the brief period of sun-light is insufficient to continue the same temperature which warmed the earth when the days were longer, and the cool nights by consequence shorter. In the language of poetry:—

"Time flies apace, since last ice-crowned December,
With his snow-mantle overlaid the earth,
What myriad hopes and fears do we remember,
That had their death or birth,
How many joys and sorrows which have made
Life's pathway one all sunshine or all shade.
Since last the ruddy Christmas hearth did brighten,
And sorrows that seemed evils to our sight,
Have "turned their silver lining to the light!"
So little do we know of what is for us,
Doomed by unerring Providence for good,
That, could the past from out its womb restore us,
The visions we have wooed,
So inconsistent must existence seem,
That reason should seem frenzy, truth a dream." D. Moir.

In the visible creation, as well as in the world of human actions and human passions, there is much which is inexplicable to the imperfect and feeble faculties of fallen man. We cannot tell why so many plants now put forth their wintry blossoms, seemingly to woo the sunshine to the sheltered nooks where they nestle from the cold. We cannot tell why the Glastonbury thorn sometimes blooms at Christmas, while the con-generic hawthorn does not flower till the middle or the end of May. We cannot tell why the elder (*Sambucus nigra*) now shows its buds bursting into leaf, while the apparently more hardy oak (*Quercus robur*) is not in bud till late in spring. We cannot tell why the snow-drop shoots up, amidst frost and snow, its slender stem and delicate blossoms, while the more robust lily, with a stem thicker than a walking stick, and a large hardy-looking flower, does not shoot into blossom before the full sunshine of summer. No more than we can divine why all-wise Providence permits us, in the language of the Scots version of the Psalms, to see

"The wicked great in power,
Spread like a green bay tree;"

while the pious, the just, the righteous, are exposed to the oppressor's scorn and the contumely of the proud. Some of the causes of these things, indeed, we may conjecture; but the real causes are, for the most part, hidden from our ken in this sublunary stage of our existence—this scene of sin, trial, and suffering.

The Christmas rose (*Helleborus niger*) is not very much like a rose, though it is so called, except in the pale rosy white of its bunch of blossoms; and these more commonly wait till May before blowing, though they do sometimes expand at midwinter. It is well known to medical men by the name of black hellebore, from the dark dusky colour of its root-stock, (*rhizoma,*) which is poisonous, but is useful in some cases as a remedy. The ancients employed it in cases of madness,

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but it is seldom used by our own practitioners, except in the form of ointment for ring-worm and similar external disorders, for which it is valuable. It is not uncommon to see it kept in pots in London, its broad shining leaves spreading over the mould, and looking well when the flowers are gone.

The Chinese primrose (*Primula Sinensis*) is a recently introduced flower, which has become an almost universal favourite for pots in windows; but unless in unusually mild seasons, it will not answer in the open garden. The common colour is a pale tint somewhat between pink and lilac, though some varieties are darker, and some quite white. Its gay appearance in winter, when few flowers are to be seen, makes it an important addition to our old stock of winter flowers. The habit, adapted to the climate of China, south of the equinoctial line, of flowering in the Chinese spring, causes this pretty flower to blow in our early winter in the same way as the chrysanthemums and camellias, without other forcing than protection from cold; for any increase of temperature beyond temperate is certain to prove injurious. Too much moisture also greatly prevents a fine bloom, and renders the plants bloated and dropsical.

Another flowering plant from the far East, is the Japan corchorus, (*Kerria Japonica,*) which, being more hardy than the preceding, flowers out of doors during a great part of the winter, as well as at other seasons, in situations where it thrives; for in some soils and aspects it will not flower at all, while in others it blows most profusely; its full yellow blossoms resembling those of the dandelion in miniature.

The garden anemone (*Anemone hortensis*) is a very gay and showy flower at this season, if it have been planted at the proper period; and it is surprising that its beauty has not rendered it more common than it seems to be: but the reason may be, that comparatively few take much pleasure in their gardens in winter, when it is too damp and cold to walk about with comfort. The writer is not aware whether it has been tried to grow this flower in pots for rooms, and has never seen it so cultivated; yet there can be little doubt that it could be successfully managed in this way, and it would certainly prove a fine ornament to our windows in winter, and would harmonise well with the Chinese primrose and the Christmas rose.

The common primrose, which is now partially in flower out of doors, might, and sometimes is reared in pots to flower within doors, and is as pretty a flower as need be kept, while its delicate odour reminds us of the budding trees in the spring, and all their accompaniments of singing birds and brightening skies. The association, indeed, of our ideas with particular flowers is one of the chief, though not the only cause, of the pleasures we derive from their contemplation.

When we see the snowdrop peeping through a covering of hoar frost or of snow, we think of the coming spring and its refreshing green. When we see the rose leaves opening, and the young branches shooting out, we think of the summer roses and the other gay flowers of the garden, of the summer air and its balmy breathings, of the summer sunshine and its laughing gaiety, of the summer birds and their merry songs, and of the summer fields and their cheerful beauties. When we see the blossoming of the orchard in the early summer, we think of the rich fruits of the autumn, the ripe cherry, the luscious peach, the honied pear, and the blushing apple, all giving token of the bounties which Providence scatters so profusely around for thankless man. And when we see, as now, the plants which bare so many fine blossoms in spring, summer, and autumn, lying withered and dead, though their roots remain fresh in the ground, and ready to spring up when the genial season returns, we think (or ought to think) that they afford a beautiful emblem of our own great destiny—our bodies cut down by death, and consigned to moulder in the grave—but still in readiness to come forth when the revivifying sound of the last trump shall call the wicked to lasting tribulation, and the righteous into eternal glory.

J. R.

VARIETY IN HUMAN CHARACTER.

We have different forms assigned to us in the school of life—different gifts imparted. All is not attractive that is good. Iron is useful, though it does not sparkle like the diamond. Gold has not the fragrance of a flower. So different persons have different modes of excellence, and we must have an eye to all.—*Wilberforce.*

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OLD HUMPHREY ON THE LETTERS OF CHRISTIAN FRIENDS.

TELL me not that you must have something new, for just at this time I have made up my mind to give you something old. Something that I have had by me for some time. Many things are all the better for keeping, and those that I am about to produce are not a whit the worse for it.

You may remember that in the days of Paul the apostle "all the Athenians and strangers which were at Athens, spent their time in nothing else, but either to tell, or to hear some new thing;" and yet the new things that they heard, all put together, did not teach them to find out God. They ignorantly worshipped an "Unknown God," from which fact we may gather, that in things belonging to our peace, however pleasant it may be to hear of what we never heard before, new things are not more likely than old things to make us wise.

From the days of my boyhood, I have had the habit of hoarding up little remembrances of persons and things dear to me. It is a habit that hundreds have; and if not carried too far, I think is well calculated to yield us pleasure, to soften our hearts, and to bind us one to another. Who is there that in walking through the garden of life remembers not with emotion that here and there once grew flowers that were dear to him, that in this or that place once flourished fruit trees that have long since been cut down. A letter, when the hand that wrote and the heart that dictated it are motionless, is, sometimes, wondrously influential; and a lock of hair, and a withered leaf, are eloquent things when the giver of them is sleeping in the grave. A stockbroker would not buy them at any price, an appraiser would value them at nothing; they are neither gold nor silver, yet are they dearer to us than diamonds.

It would amuse any one to see the perfect medley of remembrances of this kind that I have in my possession; associations of by-gone days bringing before me some with whom I have wept in the bitterness of my spirit, and others with whom I have rejoiced and "leaped over a wall."

These are costly treasures, that are told over when alone, and no miser exults over his gold more triumphantly than Old Humphrey does over his hoard of remembrances. It is not all sunshine that is gathered from our glimpses of the past; shadows, and clouds, and darkness may, here and there, rest upon them, but, for all that, they are medicine to the heart; they tell us of what really has been so, that amid the "sundry and manifold changes" of a changeable world, we "cannot but remember such things were."

While I dip my pen in my ink-pot, I take, now and then, a glance at the packets which lie before me, full of old associations. It might be tedious to you if I were to describe and dwell on their contents; and if it were not, there is that beating under my waistcoat that would not let me even attempt it. I will only lightly touch upon a few of the things they contain.

The rude sketch of my father there, was drawn by my pen in a moment when we were sitting together many a year before he was taken from the world; and the little blue flower in the paper, sprang up from seed sown by my mother's own hand: these things set me thinking.

The ivy leaves pressed flat that are now before me, were gathered by hands that will gather no more; and the church bell was striking twelve at midnight as I plucked that tuft of grass from the grave of one dear to my heart. These violets were fresh enough when put into my hand. They are faded now.

They tell me a tale of their golden prime,
How they lived their little day;
And that all will be pluck'd by the hand of time,
And wither as well as they.

The weed of the waters, and the poplar leaves, and the rose buds, silent as they are to you, to me are babblers, and that heath flower—

Enough, enough, that it bears a spell,
And that I prize it passing well:
For strangely hath it blended been,
With many a sad and sunny scene.

Interesting as these things are to me, they are not the things of which I intended to treat when I took up my pen. I meant rather to speak of the letters of old friends. Though I have burned a wheelbarrow full of them, I never destroyed one but it went to my heart. What a difference there is between the interest our friends' letters excite, before the seals are broken, and that with which we regard them seven years after!

It may be that you have your letters neatly tied up, and labelled, or it may be that you have them in the same confusion in which, to my shame be it spoken,

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mine are to this day to be found; but whether you have them in one way or the other, let me ask, Do you, now and then, glance over them? Are you quite aware that the writings of Christian friends are of great value?

You have seen a plant drooping with drought, its stem feeble, its leaves fallen, and its flowers wanting freshness; and you have seen, too, when a little water has been given to it, how it has sprung up with new life. Often has a letter of consolation the same influence on a bowed down heart. I am about to give you two or three passages from some letters before me, they may have the effect of setting you about rummaging up your own letters, in search of pearls to be worn around your necks, and of instruction to be graven on the tablets of your hearts.

There is a freedom from restraint in private letters which you look for in vain in those which are intended to meet the public eye. In my opinion, the most happy way of expressing the most happy thoughts, is to be found in the private letters of Christian people. But come, I will give you an extract from the letter before me.

"It has pleased me often in musing on the events of past years to take the little ups and downs of my natural life, and make them, as it were, types and shadows of the hills and dales of my spiritual journey, since it has pleased God of his great mercy to turn my face Zionward, and set my feet in the narrow way that leads to the heavenly Jerusalem.

"When I was a child, my life was chequered; I had my joys and my sorrows, bright days and cloudy ones, showers of sugar-plums and strokes of the rod; banishment from the light of my father's countenance, and kisses and feastings on his knee: and when I became a babe in Christ, things went on pretty much in the same way.

"Many a downfall had I, and many a lifting up, many a chiding till my cheek was wet with tears, and many a loving smile from my heavenly Father's countenance, that made my days like a pleasant dream: there seemed nothing worth wishing for on this side the sun.

"I love to compare the mistakes and the buffetings of my first childhood, the lesson-learning of my first school days, with the experience of after-years, and to trace in both how the Lord has brought me by a way that I knew not, to this day: yea, and will bring me until my feet stand fast upon the shores of the promised Canaan, and I need no more the rod of his fatherly correction."

Now I cannot tell how this will strike you, but to me it appears a beautiful outpouring of a simple heart set on eternal things. It is the language of one who has chosen the better part, or rather been chosen to walk in the way everlasting.

The following is a remark that pleased me much; I hope it will please you.

"There is no Christian grace in the whole world that I am now so much in love with as humility,—no one that I feel so much the want of. I do mean to beg for it, in my Saviour's name, as I would for a bit of bread if starving; and I do believe my heavenly Father has this precious gift in store for me. All my desire is to be still, to sit me down quietly at my Saviour's feet, to look to my own soul, and to weed my own garden, making the best of my way heavenward guided by God's word, never minding wind nor weather, having found great encouragement in the discovery, that the rougher the road the safer."

I love to play the part of a spiritual fisherman, and to catch all that comes into my net. Now the above remark seems to me to contain all the proper elements of a Christian elevation of mind: 1. A consciousness of defect; 2. A desire for spiritual good; 3. A resolution to seek for it with sincerity; 4. A faith to believe that it will be granted; and, 5. A determination, whatever may betide, to continue in a heavenward course. Here is another passage:—

"What have I to do with what people think of me, or call me? Should it not be my care entirely to 'walk before the Lord in the land of the living?' and surely this will require all my care. When I was in the 'horrible pit,' and the 'miry clay,' though all those whose good opinion I loved and valued most on earth had come together to comfort me, their comfort would have been as the sound of the wind; and when I was upon the mount of rejoicing, if they had come to afflict me, there was such a sunshine in my heart, such a jubilee in my soul, they could not have troubled me. Therefore I say, 'My soul, wait thou only upon God; for my expectation is from him.'"

There is a great deal in this extract that is well worth pondering; for I am

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afraid that many of us too frequently think less of our walk before God, than of our walk before men. Often if what was going on in my heart, in this respect, was made visible in my countenance, I should be ready to hide my face with both my hands. I will now give you an extract that, as I read it, made me glad.

"It is said that a lute, or a harp, will never give a certain sound if its strings are wet; instead of the rich, the mellow, the full-bodied tone, it emits one that is weak, and wavering, and inharmonious. I have been a mourner, and my Zion-song has been faint and querulous; but now 'Awake up, lute and harp! I myself will awake right early,' for I am like an injured instrument, which, having been *in the hands of the master*, has greatly recovered its proper tone."

On such passages as these I can muse with joy, for they feelingly persuade me that my fellow Christians have thoughts, and reflections, and feelings, and affections akin to my own. I might give you a hundred other extracts, but prefer rather to whet than to satiate your appetite. Read over again the Christian letters of your Christian friends, for it is like drinking "of the brook by the way." It will give you an added relish for "the waters of the fountain of life," and you will hold up your heads with thankfulness and praise.

WORLDLY GOOD.

The good things of this world, though in themselves they are not evil, yet they many times prove so. They are no enemies to us, yet through the corruption within, and the devil without, they become materials of lust, and war against us. He gets into these, and by them into us, as he did into our first parents, and overcomes us. But faith is an antidote against this poison of the serpent. Faith instructs us that the things of this world are all vanity, and as such not much worth our seeking; for things that are vain and empty cannot make us happy whilst we have them, nor miserable if we have them not. It teaches us that they are but common blessings, the gifts of common bounty, to good and bad; they may be given in hatred, and withheld in love. Since, therefore, they are no signs of God's love, they deserve but little of ours. They will rather hinder than forward us in our Christian race, disturb us in our way to heaven, and make the entrance into it difficult; they are therefore better lost than found. They are good in their kind, but they are not the best things; hence it will be our happiness to live above them, and our greatest delight, not to delight in them. Martha's work was good, but Mary's was better. It is sometimes necessary to want them, and therefore never necessary inordinately to love them; for, in things of which there is no absolute necessity, there is no great reality. Inordinate love to them is inconsistent with love to God—with his love to us, and ours to him; for they are to be loved only in Him, and for Him. Him we cannot love too much, nor those too little. They will be but of little use, and that to our bodies only, while we live, and avail us nothing when we come to die; it will then signify nothing whether we fall under a great or small title, die rich or poor as to this world, so that we die rich in faith, as all the patriarchs did. We should continually bear in mind, that the continuance of them is short and uncertain, but the abuse of them will eternally torment; therefore, it is better to be without them, than to be made miserable by them. Riches may be found in poverty, and fulness in wants; enough without them, and more than they afford may be found in a crucified Saviour, who is virtually all. A poor believer is as great a contradiction as a dark sun.

Thus faith brings down the market of worldly things, and lessens them in our esteem. For as things appear to be, so they are esteemed. It draws a cloud over this earthly tabernacle, and eclipses the glory of it, or rather shows that it has none; condemns the folly of all that think not so, and shows how much it concerns them who by faith are crucified to the world, neither insatiably to lust after the things of it, nor inordinately to love them, nor through discontent to complain for the want of them.—*Francis Fuller.*

THE HEART.

The deceitfulness of the heart produces ignorance of ourselves. It keeps men strangers to their own character; and makes them fatally presume that they are in friendship with God, when they are enemies to him in their minds and by wicked works.—*Dr. Black.*

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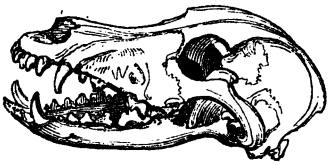
ON THE TEETH OF MAMMALIA.

(Continued from page 420.)

We now come to the consideration of the true carnivora, such as the wolf and the lion, whose food consists of the flesh of large animals, for the lacerating and severing of which, their teeth are expressly provided. In the *insectivora* we saw, on one hand, the grinders bristling with many sharp points arising from the crown of each, and locking together when the jaws were closed; such a mode of construction being required from the mincing of hard insects, small reptiles, etc.; and on the other, the grinders (in such as possessed them) of a cylindrical shape, with flat or nearly flat surfaces, so as to be fitted for crushing ants and soft insects. In neither case did the grinders exhibit a scissor-like action upon each other, by the passing of one set by the side of those in opposition.

This mode of construction obtains, to a greater or less extent, in the whole of the group now before us. The dentition of the carnivora is well exemplified in the subjoined sketch of a dog's skull, from which we shall see that the grinders, or molar teeth, are divided into three kinds, according to their characters. We shall, however, consider the whole of the dentition.



1st. The incisors. These are six above and below, in the dog, cat, etc.; but in the *marsupial carnivora* (the dog-headed thylacinus, for example) their number is greater. The incisors, it will be observed, are here weak and small; their utility is very subordinate, and their loss of little consequence.

2nd. The canine teeth. These are strong and conical, bending slightly backwards; their presence is very material, as they are formidable instruments, either for tearing the victim about to be devoured, or for enabling their possessors to defend themselves against aggression.

3rd. The molars. These are divided into the *false molars;* the *laniary molars;* and the *tubercular molars.*

The *false molars* vary in number in different genera: in the genus *Gulo* they are three or four in number on each side; in the genus *Canis*, three above, and four below; in the genus *Felis*, two above and two below; in the genus *Hyæna*, three above and three below, etc. Nor do they less vary in size than in number; often they are very small, especially the anterior; they are generally pointed.

The *laniary molars* are of main importance, but their number is limited to one on each side above and below; they are sharp-edged, and compressed in shape, with one or more spear-like points, for lacerating flesh; the action of each tooth upon its opposite fellow is scissor-like, the tooth of the lower jaw passing on the inner side of that above. From this contrivance results the power of cutting asunder the tough muscles and skin of the beasts on which these animals habitually feed.

The *tubercular molars* are so called, because they possess a blunt internal projection, often to the exclusion of a cutting edge, which in some genera still characterises these teeth, and approximates them to the *laniary*. In the genus *Felis*, there is only one very small tubercular molar above, and none below; in the *Hyæna* the same; in the genus *Canis*, two above and two below, (on each side;) in the civets and *Ichneumons*, two above and one below. Their use appears to be, to crush the morsels cut of by the laniary molars, and by their own sharp edges, where they exist. In the dog, they assist in grinding bones and similar hard substances.

Such is the dentition of the carnivora, a dentition strikingly in accordance with their habits, instincts, food, and general organization. A thirst for blood, a keen eye, a high sense of smell, caution, watchfulness, cunning, and rapacity, are their attributes; according to their size, they possess greater bodily strength and greater power of endurance than other animals. Some take their prey in open warfare; others by wiles and stratagems. They are endowed (many, at least) with considerable intelligence; and several are capable of being tamed. The dog has been a friend and companion of man from the earliest epoch; and the hyæna, the lion, the leopard, the wolf, etc., have been occasionally domesticated. The cheetah is used in India like a greyhound, for the chase of the antelope.

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It is time, however, for us to examine the dentition of the *piscivorous*, or fish-eating group; by which we mean seals, dolphins, porpoises, etc., animals of aquatic habits, which make the waters of the ocean their home, and in the depths of which they pursue their finny prey.

The dentition of the seals is very various; it consists of incisors, canines, and molars.

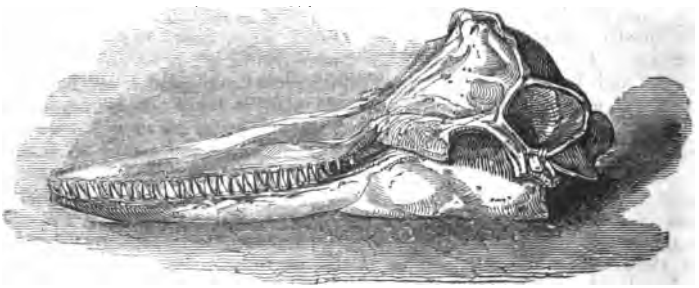
The incisors are of moderate size, and usually four or six on each jaw; they are of a conical figure, more or less incurved.

The canines are large and strong.

The molars differ exceedingly. In some they are compressed, with jagged edges, having one or more decided spear-like points, the action of one set on the opposite being scissor-like. In others the molars are deeply divided into three conical points, the middle point being the largest. In others, again, they are simple conical bodies, set at a little distance apart, like a row of blunt pegs. This variety of form is not easy to be accounted for; but, no doubt, is connected with the precise nature of the food, or the sort of flesh, upon which they habitually feed.

In the porpoises, dolphins, cachalots, etc., the dentition is very simple and appropriate. There are no incisors, nor canines, nor true molars, though as molars they are usually regarded, and so denominated. Each jaw is armed with a row of these teeth, which are sharp, conical, set at small distances apart, and often amounting to the number of sixty. When the two jaws are closed, the teeth fit in very nicely between each other; the interval between two teeth being filled by an opposite tooth adapted to it. In illustration we subjoin a sketch of the skull of a species of dolphin, copied from nature.

What a formidable row of teeth does this skull exhibit! and how well is such



Skull of a species of Dolphin.

an arrangement suited to the wants of the animal! What fish can extricate itself, struggle as it will, from the grasp of such jaws? The snap made by the porpoise, or mighty cachalot (spermaceti whale) is as fatal as unerring; the teeth, driven by the power of muscles of extraordinary volume and energy, which act upon the lower jaw, pierce deep into the flesh of the hapless prey, and often cut the victim at once asunder. Tyrants of the sea, their presence strikes terror among the shoals of fishes, migrating from the ocean depths to the shore; thousands of these are sacrificed to glut their ravenous appetite. No sooner are the hordes of herrings, which periodically visit our coasts, observed approaching, but the porpoise is seen, fierce and active in the chase; rising every moment for air to the surface, down he plunges after his prey; rapid as the fish may be, it cannot escape its resolute and persevering foe, which, like a well-trained hound, will never quit the chase. The porpoises and the dolphins usually hunt in troops, driving the game before them: nor do they stop when they have caught a victim, it is snapped, and without further ceremony instantly swallowed, no delay being occasioned to the onward course of the unsatisfied devourer. The larger fishes, seals, and other tenants of the deep, are the prey of the gigantic cachalot.

Leaving the carnivorous groups of

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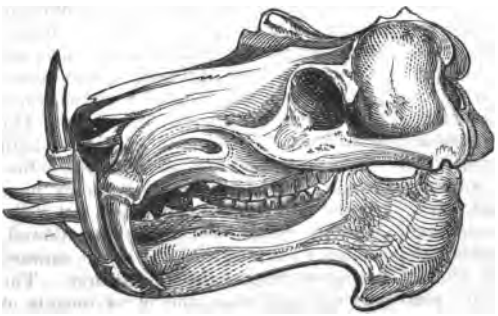
animals, let us briefly consider the dentition of such as feed purely upon vegetable substances, to the digestion of which their stomach is more or less exclusively adapted; we say more or less exclusively, because there are to be found in this extensive section, several which indifferently devour either flesh or vegetables. We may instance that destructive animal the rat, as an example in point; others might be added. Cuvier divides the vegetable feeding quadrupeds into *Rodentia*, *Pachydermata*, and *Ruminantia;* in addition to which, the kangaroo and others of the marsupial order must also be enumerated. One thing in all herbivorous mammalia deserves notice, namely, the absence of canine teeth altogether; or, where present, (as in the horse, camel, etc.,) their comparative feebleness, together with the distance that intervenes unoccupied between the incisors and the molars.

Of the teeth of the *Rodentia* we have often spoken; they consist of chisel-like incisors, and grinders with ribbands of enamel, mostly transverse, intersecting their surface. The action of the jaws is backwards and forwards, so that the transverse ridges of the molars rubbing against each other, grind to pulp the vegetable substances subjected to their action. The teeth of *capybara* admirably represent this folding backwards and forwards of enamel, in transverse lines across the teeth. See "Weekly Visitor for 1834," page 330, where there is a sketch, showing the surface of the grinders of this animal.

The teeth of the *kangaroo* bear a very close relationship to those of the *rodentia*. The incisors are six above and two below, the former being short and broad, the latter large, pointed, and projecting forwards; the incisors of the upper jaw meeting them perpendicularly, so as to form an angle. The molars, separated by a wide space from the incisors, consist of four on each side above, and four below. Their surface is rough, being crossed by two transverse ridges, joined by a middle ridge communicating between them.

In the *Pachydermata* the dentition exhibits considerable modification of character, according to the particular food and habits of the genus or species. One of the most remarkable of animals in this order is the elephant, of which there are two species at present extant. The dentition of these gigantic quadrupeds bears a considerable affinity to that of the *rodentia:* it consists, first, of tusks from the upper jaw, in place of incisors; and, secondly, of molar teeth, which in the Indian species have the surface transversely crossed by parallel bands of enamel,—whereas in the African species these bands are irregularly lozenge-shaped.

In a former number of the "*Weekly Visitor*" we have entered into the details connected with the dentition of the elephant. We shall not enlarge upon it here, but refer our readers to the article in question. See "Weekly Visitor," for 1833, page 458. Among the *Pachydermata*, the mighty hippopotamus holds a distinguished place. It inhabits the rivers of Africa, coming on shore at night, to feed on various kinds of herbage, roots, etc. To convey an idea of its dentition, we annex a sketch



of the skull, and also of one of the molar teeth. The incisors, which are four above and below, are conical and projecting. The canine teeth are large and

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curved, the upper being worn down by its action against that of the under jaw opposing it. They are of the hardest and finest ivory. The grinders are seven on each side above, and six below. Their surface is trefoil-shaped, with more or less regularity, except in the interior, four above and two below, which are small, and must be considered as false molars. In all the *Pachydermata* do we find the molar teeth, with rough or ridged surfaces, adapted to the coarse vegetable matters on which they habitually feed. We may instance the horse, the rhinoceros, and the tapir. Nor are there wanting in this order examples which to their vegetable food add animal diet, when the opportunity presents. The hog, for instance, displays a carnivorous appetite; and how is he provided with tusks of the most formidable character, and with molar teeth, whose surfaces are either crossed with ridges of enamel, or rough (as is the posterior molar) with irregular projections.

Leaving this order, the *Ruminantia* claim our notice.

If we except the camels, which have both incisors and canines above and below, and the musk-deers, which have canines above, the ruminating order has only molar teeth in the upper jaw, and incisor and molar teeth in the under. Their food consists of tender herbage and leaves, which is ground to a pulp by the action of the jaws: the molars are flat, with ribbands of enamel, forming regular pointed ridges across their surface, in a saw-like manner, so as to adapt them for their grinding operation. The action of the jaws is from side to side, the articulation (or hinge on which the lower jaw moves) being adapted accordingly, so as to allow of great freedom of lateral movement. The liberty given to the articulation has a due relation to the food, and consequently to the character of the teeth. In omnivorous animals it has a moderate degree of freedom, both of lateral motion, and backwards and forwards. In carnivorous animals it is locked in such a way as to allow of mere scissor-like opening and shutting of the jaws, without any other movement. In the *Rodentia* the movement of the lower jaw is backwards and forwards, while, at the same time, the jaws open and close; the hard food on which these animals subsist not only requiring to be chiselled by the incisor teeth, but thence conveyed to the molars, to be there filed to pulp or powder. In the *Pachydermata* and *Ruminantia*, the action of the jaws is principally lateral, (of course we except the opening and shutting motion which is universal,) and especially in the latter order, as may be seen by any one who will watch the movements of the jaw of a cow while feeding. It is thus that the teeth and the articulation of the jaws will be found to harmonise with the nature of the food: the nature of the food requires an according modification of the digestive apparatus, and of the external organs by which it is to be procured. The hand of the monkey, the talons of the lion, the paws of the squirrel and marmot, the paddles of the dolphin and cachalot, the hoofs of the horse and ox, are all in accordance with the necessities, instincts, and internal organization of each, and declare the resources of that skill and wisdom, the depths of which are past finding out. M.

INDUSTRY AND TEMPERANCE IN SWEDEN.

In Sweden, almost every family not only makes its own linen, but the major part of the peasantry build their own houses, make their cloth, shoes, and the wood-work of their agricultural implements, bake their own bread, brew their beer, make malt, kill their own meat; and, in fact, almost every thing belonging to housekeeping is prepared at home, which renders this department very difficult to be undertaken by a foreigner, who, though he may be a proficient in the arts of tilling the soil, cannot easily turn his hand to such a variety of employments.

The long winter obliges them to preserve large quantities of fruit and vegetables, which are, in general remarkably good: for the summers are warm, which causes all kinds of fruit to ripen in the open air much better than they do in Scotland.

The separation of the lands from the villages, has been attended with the greatest advantages; for it has not only given the people an opportunity of inclosing them, but many have divided them into regular farms and steadings. And thus every man being at liberty to cultivate "his own," the greatest scope and encouragement have been afforded to exertion and skill, which has been

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followed by the happiest results; since within a few years an improved method of cultivation has sprung up, little inferior to the best agricultural districts in this country.

"If we compare," observes a late writer, "Sweden with any other country in Europe, with respect to population, I suppose no other has made such a rapid progress in agriculture."

It seems to be a principle in political economy, that, wherever the advantages of industry are exhibited by examples going before, and its rewards not only adequate, but open to all without distinction, there the people will become active, sober, and frugal. For it appears impossible that the population of a rural village should see another becoming rich and affluent, with precisely the same advantages as themselves, without being prompted to imitate their example.

Hesiod, the oldest writer on agriculture, who lived perhaps more than nine centuries before our Saviour's birth, has alluded to this feeling of emulation, which he calls Ερις, a useful kind of "strife," inasmuch as it does not put men upon hurting one another, but upon benefiting themselves.

In Sweden the philanthropist has the pleasure of seeing these remarks exemplified; and the time may, perhaps, be not far distant, when we shall in this country see a return to small farms, and here and there a nook of land made productive by the hand-tillage of the industrious labourer.

In Sweden, every person found drunk is fined three dollars, or sent to the house of correction for a certain number of days, to hard work.

"In 1832," Mr. Stephens remarks, "I was at Carlstadt market, when at least ten thousand persons were collected together, from all quarters within a hundred miles, besides many from Norway; but in that multitude I did not see a single person that was the worse for liquor."

No man is admitted into the standing army or navy unless he can produce a good character from the clergyman of the parish to which he belongs: through this regulation, there are fewer depredations committed by Swedish soldiers, both at home and in foreign countries, than in any other army.

The temperance of the peasantry, and the good conduct of the army, may seem rather surprising, when we consider that every farmer is a distiller. Every proprietor and occupier of land has a right to distil spirits; the size of the still, and the amount of duty, depending upon the value of the property. In 1829, there were 167,744 stills in use, which were computed to make thirty million gallons. Distilling is very advantageous to the farmer, as it enables him to keep a greater number of cattle, and yields him an abundance of manure, while the spirits are easily carried to market, where a ready sale awaits them. If but a small part of this is actually consumed in Sweden, one is compelled to ask with a melancholy earnestness, in what direction does this tide of thirty millions of gallons roll, and where are the victims which it drowns in present ruin and everlasting perdition?

MELT HIM BY KINDNESS.

Such is the force of an apostolic charge, in reference to the treatment of an adversary: "If thine enemy hunger, feed him; if he thirst, give him drink: for in so doing thou shalt heap coals of fire on his head," Rom. xii. 20.

The image employed in this passage is manifestly taken from the working of metal in certain circumstances. To strike it with a heavy hammer, would only break it in pieces; and thus the end of the artizan would not be answered. "Coals of fire" are therefore heaped upon it, or it is exposed to the heat of charcoal, and then the metal melts, and will receive the impression of any mould into which it is poured. In like manner, then, we are required on some occasions to act; violence would only increase exasperation, but kindness will render even the malignant and wrathful submissive. The course thus enjoined, is unhappily taken by few, yet none have pursued it without some gratifying results.

A Christian merchant, for instance, retired from the engagements of commerce, to a pleasant residence on the banks of the Mersey; and while his gardens and hot-houses abounded with choice and valuable fruit, they were entered by some depredators, who carried away much of their produce. The next morning the proprietor caused a placard to be issued, intimating that the gardens had been plundered of a considerable quantity of fruit; and that as it was possible that want might have incited to the act, he took this method of giving notice, that if such were the case, and

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the person offending would make known his circumstances, he should not only be freely forgiven, but his necessities should be relieved. The result was soon apparent: such was the effect of the statement, that though the premises were peculiarly exposed, no other instance of depredation occurred. Even the rude and uncultivated villagers felt the commanding influence of kindness so great, and unhappily so rare; and could only regard the interesting person who had fixed his residence among them, with a feeling of veneration such as they had never cherished before for any human being.

Another fact of the same class may be gleaned from the life of Lord, at that time Sir James de Saumarez. When the mutiny at the Nore broke out, the Orion, which he commanded, escaped it altogether, owing to the subordination of the men, and the attachment they felt for their worthy commander, with whom the greater part had served from the commencement of the war. It was from confidence in them, founded on accurate knowledge, that he consented to receive, in hope of his reformation, one of the worst of the mutineers, but an excellent seaman and ship-carpenter, who was to be tried for his life. Seasonable admonition and paternal attention to the man's feelings on the part of Sir James, had, however, their desired effect. A few days after the rebel got on board, the signal was made for the boats of each ship to be manned and armed, to witness the execution of four criminals in one of the mutinous ships. Sir James, therefore, sent for him into the cabin, and after expostulating with him on the heinous crime he had committed, he assured him that he would spare him the anguish he must endure, of beholding others suffer for an offence of which he had probably been the guilty cause. This was the last effort made to work a change in the mutineer, and the effect was complete. His rebellious spirit was subdued, he fell on his knees bathed in tears, and blended the strongest protestations of loyalty to his king, with the warmest expressions of attachment and gratitude to his commander. Nor were the feelings he displayed soon repressed. He was true to his word; his exertions were commensurate to his promises, and he who had been the most obdurate of rebels, became one of the most faithful sailors Sir James Saumarez ever had.

The Divine requirement, thus briefly illustrated, demands a constant remembrance. It is doubtless more easy to indulge the natural and depraved feelings of the mind; but of this there is an express prohibition. "Dearly beloved, *avenge not* yourselves, but rather give place unto wrath: for it is written, Vengeance is mine; I will repay, saith the Lord." "Be not overcome of evil, but overcome evil with good," Rom. xii. 19, 21. Such injunctions are alike wise and benevolent in regard to *both* the parties concerned. Retaliation and revenge mar personal quiet, while they agitate and distress the mind, and consequently they should be avoided by him who is offended; nor should the fact escape observation, that by them the offender is urged to other and greater atrocities.

Opportunities for the display of an opposite spirit are of frequent occurrence. Should, then, a child appear stubborn and unyielding, or a man of mature age disposed to the words and acts of a rancorous malevolence, the time has come for a special display of that true magnanimity which the gospel of Christ alone can induce and sustain, and this will be given in obedience to the charge, "*Melt him by kindness.*"

THE CHARACTER AND STATE OF THE UNGODLY.

Psalm i. 4—6.

THE righteous, we have seen, are like a tree firmly rooted in the ground, and "having their fruit unto holiness. But the wicked are like the refuse of winnowed corn, which is barren, bringing forth no fruit: they are unprofitable servants. It is light, and apt to be driven to and fro by the wind. "It is a good thing that the heart be established with grace;" but, "unstable as water," these do "not excel."

"Therefore," because they are so unprofitable, so worthless, and so unstable, they shall not be acquitted, but sentence shall be pronounced against them. How needful then the caution of our Lord: "Watch ye, therefore, and pray always, that ye may be accounted worthy to escape all these things that shall come to pass, and to stand before the Son of man." And that, also, of the apostle, "Wherefore take unto you the whole armour of God, that ye may be able to withstand in the evil day, and having done all, to stand." They "shall

not stand in the judgment." "For God shall bring every work into judgment, with every secret thing, whether it be good, or whether it be evil." "Nor sinners in the congregation of the righteous." No—"There shall be weeping and gnashing of teeth, when ye shall see Abraham, and Isaac, and Jacob, and all the prophets, in the kingdom of God, and you yourselves thrust out."

The Psalmist concludes this psalm with saying, "For the Lord knoweth the way of the righteous: but the way of the ungodly shall perish." Thus Solomon says, "He preserveth," or favoureth, "the way of his saints;" that is, he beholds it with complacency and delight. Thus, too, Job says, "He knoweth the way that I take: when he hath tried me, I shall come forth as gold."

Would we then wish to share in the favour which God bears to his people, let us walk in their way, for it is a way which he approves. Would we, on the other hand, escape the sentence pronounced upon the wicked, let us avoid their way, for it shall perish. "There is a way which seemeth right unto a man, but the end thereof are the ways of death;" for, when God awaketh he shall despise their image—the image they have borne of Satan: whereas the righteous have borne the image of God, stamped by the Spirit of God upon their hearts. C. J. M.

NIGHT ON MONT BLANC.

Dr. Barry, one of our adventurous countrymen who ascended what has been described as the "monarch of mountains," thus describes a part of the scene he beheld:—

It was a brilliant night. Beneath a dark and cloudless vault, the sunny mantle of the mountain shone resplendent with the beams of a full, Italian morn. The guides lay buried in the deepest sleep. Thus, in the midnight hour, at the height of 10,000 feet, I stood—alone: my resting-place a pinnacle of rock, that towered darkly above the frozen wilderness, from which it, isolated, rose. Below me, the yawning rifts and uproarious desolation of the glacier, presented an appalling picture of dangers scarcely gone by; around and above was a sea of fair but treacherous snow, whose hidden perils yet lay before us. I saw the chain of Jura, and the distant top of many an unknown alp,—an earnest of the prospect from still more lofty regions; yet among them, Mont Buet's white dome—a warning monument of Eschen's fate—forbade the attempt to go up higher. The vale of Chamonie slept at the mountain's foot; and, now and then broken by the deep thunder of an avalanche, the profoundest silence reigned. It seemed the vastest, wildest, sternest of nature's prodigies reposing; now starting as in a fitful dream, then sinking again into the stillest calm. The influence upon my mind of that poetic "vision of the night," I must despair of ever being able to communicate to others; and yet the scene itself was "a picture in my memory," standing alone, unalterable by time. It held me till an hour and a half had passed away; when a recollection of the coming day's fatigues, rendered it proper, again to try, at least, to take repose.

THE GREEK FUGITIVES.

In the evening, Mr. Leeves and myself proposed to walk to the hill over the town, (Therapia, on the Bosphorus,) though exposed to hazard from the wanton brutality of scattered Turks, discharging their pistols at every object that presented itself. We were just leaving the house when two young Greek ladies entered. One was singularly dignified in her manners and appearance, and seemed not disturbed from her ordinary self-possession; the other, though more comely, was altogether overcome by terror and dismay. They informed us, they were the daughter and wife of two Greek gentlemen, whom the Turks were in search of, and whose discovery would be attended with certain death; and they entreated an asylum in this, the only house that could afford them protection.

It was impossible to conceive a state of embarrassment more painful than that in which we now found ourselves. The severest measures were denounced and pursued against those who had harboured fugitive Greeks. Besides the immediate danger to which it would personally and immediately expose my friend and his wife, unprotected as they were in this remote and now lawless place, the circumstance of my being connected with the English embassy, and abetting the escape of denounced rebels; might compromise me in a serious manner with the Turks, in their present state of

excitement. On the other hand, to refuse the asylum would be turning out to certain death persons who might be, and probably were entirely innocent.

In this dilemma, we resolved upon a middle expedient; to go out, and make no inquiry on our return, and so know nothing of any persons who might be concealed in the house.

Having made this determination, we were just leaving the hall, when two men rushed in from the street. One was a venerable gentleman with a long grey beard, the father of one of the young ladies; the other was a large and comely man, the husband of the other. It was impossible to conceive a scene more deeply interesting than that which now presented itself. The wife in an agony of grief, prostrated herself at our feet, her long hair scattered in the dust, and her face pressed to the ground in all the dejection of oriental abasement. The daughter stood erect, and with a countenance in which the whole energy of mind and feeling seemed to concentrate, demanded, with the air and eloquence of an Aspasia, the rites of hospitality and protection for her venerable father in his utmost need; which, as Englishmen, we could not refuse him. Before us stood two men, bound to them by the strongest and most endearing ties of nature and society, whose lives, with those of probably all their kindred, depended on the breath of our mouths. A moment's determination would consign them to immediate life or death. I looked out at the door, the Turks were coming up the street, after having just searched the house from which the fugitives had escaped. There was not a moment to lose —the hall-door was closed and bolted, and we determined to abide the hazard.

As we supposed that their pursuers would immediately attempt to follow them, we hurried off the men to the most secret part of the house, and concealed them in the best manner we could. Mr. Leeves was determined, if the Turks demanded entrance, to stand upon his right as an Englishman, and refuse it as long as he could; though in the present state of things, there was little hope that any right would be respected. The Turks, however, did not now demand it; they stood for a short time looking at the house, with pistols in their hands, and passed on to search others.

We then took counsel how we should dispose of our unfortunate guests. Behind the house, separated by a high wall, was the demesne of Ypsilantes, now that of the French palace. This communicated with the Bosphorus, and the hill over it; so it was resolved to disguise them as Franks, put them over the wall at midnight, and let them make their way to the sea-coast, where they hoped to meet one of the many vessels employed in the clandestine conveyance of Greeks to Russia.

We now proposed to disguise the men as well as circumstances would permit. We first cut off their beards, and then shaved them. As they meant to assume the character of sailors, we thought it would be well to give their fair faces a sun-burnt look, but we had nothing at hand to do it. At length we thought of snuff; and here a trait of that hilarity and thoughtless gaiety which distinguishes the Greek character occurred. In rubbing the snuff on the face of the old man, it set him sneezing violently; the grimace he made was odd, and the use of the snuff so out of the way, that they were all seized with uncontrollable fits of laughter, and in a moment seemed to forget entirely the state of anxious peril in which they were. They were soon, however, recalled to it in a most painful manner.

It was now midnight; the room we were in opened on a platform, which communicated with a tiled roof in the rear of the house. We were alarmed at the sound of feet walking on the tiles; and, on looking through the glass door, perceived the figure of a man approaching. I ran to the front window, and there saw a body of Turks at the hall door. It was now all over, the house was surrounded: disguise or concealment was in vain, and the unfortunate fugitives sat petrified and motionless with terror. The man put his face to the glass to ascertain that the Greeks were there, when suddenly the mother started from the abject terror in which she lay, uttered a cry of joy, and clapping her hands, ran to the door and opened it. She had recognized the face as that of her son. He was a fine comely lad, about fifteen, disguised in a Turkish dress. When the family dispersed, he had concealed himself in a place of safety; but feeling the utmost anxiety about the fate of his parents, he had come forth to find and assist them. He suspected where they had taken

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refuge. He had procured a ladder, and at the most imminent personal risk, had taken a circuit, dragging it after him, till he reached the high wall of the French palace, which he climbed, and so found those he was in search of.

By the assistance of this noble-spirited, intelligent lad, we managed every thing. We adapted our clothes to fit the men, tied cravats about their necks, and put hats on their heads.

Mrs. Leeves made up a sack with a supply of provisions, that they might not be under the necessity of seeking food at a house, and we replenished their purses with some piastres.

In the security of property, the Greeks generally rest it in valuable portable ornaments, which they may always carry about their persons; and the ladies had jewels and gold chains, which could not be available by the men without great danger, but which they wished to leave with us. Of course we declined such a deposit. When every thing was prepared, their young guide led them to the ladder: as they descended at the other side they made the usual Greek salutation, first applying their hands to their lips, and then their forehead. They disappeared behind the wall, and we never saw them again. We continued several days in no small anxiety about their fate, but learned at length that they had made their way in disguise to the sea-coast; they were then taken on board a Russian vessel, and were conveyed in safety to Odessa, where their family soon after joined them.

We afterwards found that the people we had preserved were highly respectable. The young lady, whose unshaken dignity we had admired, was the descendant of a Greek princess, and herself entitled to that appellation; and both the gentlemen were high in rank and station among their countrymen. What connexion they had with the revolution, or whether any, we could not learn; but when we reflect on the event, and consider that so many excellent persons had thus escaped a miserable death, or intolerable suffering, and were now living in health and enjoyment, we felt one of the purest pleasures reflection could impart. As the Turks exhibited beards as trophies of death, we preserved them as evidence of life. We divided those of the men we had disguised, and still retain them as memorials.—*Dr. Walsh.*

A CHARACTER.

Familiar as we unhappily are, with the manifestations of pride, vanity, avarice, and ambition, it is not only pleasant but edifying, to contemplate the exercise of opposite principles.

The materials for the following portraiture, have been supplied by our poet Wordsworth, in his Notes to "The River Duddon, and other Poems."

Robert Walker was born at Under Crag, in Seathwaite, in the County Palatine of Lancaster, in 1709, of obscure parents, and was the youngest of twelve children. As he was a sickly child, and not likely to earn a livelihood by bodily labour, he was taught reading, writing, and arithmetic by the parish schoolmaster; and made sufficient progress to become, while yet a lad, a teacher at Loweswater. Assisted by a gentleman in the neighbourhood, however, he managed during his leisure hours to acquire a knowledge of the classics, and he was afterwards ordained as a clergyman of the Church of England.

The choice of two curacies was now offered him: each being of the same value—*five pounds per annum*,—but wishing to marry, he chose the cure of Seathwaite, as a cottage was attached to it. He got, as he expressed it, "to the value of forty pounds for his wife's fortune," the savings of her wages, and with this the worthy couple began housekeeping.

Nineteen years after, a gentleman who had frequently heard of him before, found him in circumstances truly primitive. He was sitting at the head of a long square table, such as was commonly used in that part of the country by the lower class of people, and was dressed in a coarse blue frock, trimmed with black horn buttons; a check shirt, a leathern strap about his neck for a stock, a coarse apron, and a pair of great wooden-soled shoes, plated with iron to preserve them, and commonly called clogs. He was eating his breakfast, with a child on his knee, while his wife, and some of the children were waiting on each other; and the rest were engaged in teasing and spinning wool. At this business, he was a great proficient, and moreover, when the wool was made ready for sale, would lay it by sixteen or thirty-two pounds weight on his back, and carry it to market, even in the depth of winter, seven or eight miles on foot. This visitor

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expresses his astonishment at the sense and ingenuity of this remarkable man, and also at the alacrity and good-humour of himself and his wife.

At the same time, he bears honourable testimony to "his candour and meekness; his sober, chaste, and virtuous conversation; his soundness of principle and practice;" and also to "the happiness of his people," among whom he lived in the greatest unanimity and friendship.

At this time the annual income of Mr. Walker's chapel was, as nearly as he could compute it, about seventeen pounds ten shillings; and yet when the bishop of the diocese recommended the joining to the curacy of Seathwaite the contiguous one of Ulpha, it was a sufficient reason for his declining the offer, that "it might be disagreeable to his auditory at Seathwaite," and that the inhabitants of Ulpha despaired of being able to support a schoolmaster who should not be curate there also.

In a second letter to the bishop on the subject, he says in reference to the union of these chapels: "It would be apt to cause a general discontent among the inhabitants of both places; by either thinking themselves slighted; being only served alternately, or neglected in the duty, or attributing it to covetousness in me; all which occasions of murmuring I would willingly avoid."

The stipend attached to the curacy was subsequently augmented, but Mr. Walker's income was still extremely scanty. Nevertheless the frequent offer of much better benefices could not tempt him to quit a situation where he had been so long happy, with a consciousness of having been useful.

Other particulars in reference to him, are not less remarkable. His hospitality as a parish priest, is described as "munificent." Every Sunday there were served on the long table already described, messes of broth for the refreshment of his congregation who came from a distance, and usually took their seats as parts of his own household. It seems scarcely possible that this custom could have commenced before the augmentation of his cure. But what would have been to many great self-denial, was reckoned by the pastor and his family as a gratification. The treat could only be provided by dressing at one time the whole, perhaps, of their weekly allowance of fresh meat; and, consequently, for a succession of days, the table was supplied with cold victuals only.

Mr. Walker was equally generous in the education of his family. It appears that he met with some liberal benefactors, or such as he deemed so, by whose assistance he was enabled to rear a numerous family; and even to support one son for some time as a student at Dublin College.

His industry and perseverance were also very remarkable. For eight hours a day during nearly the whole week, he was engaged in teaching; and while the children were repeating their lessons at his side, he employed himself at the spinning-wheel. In the evening the wheel was constantly in readiness, to prevent the loss of a moment's time. Entrusted with the extensive management of public and private affairs, he was occupied at one period of the year, during a part of the night, and sometimes the whole night, as scrivener, preparing petitions, deeds of conveyance, wills, and other documents. He also tilled his garden with his own hands; pastured on the mountains a few sheep and a couple of cows; rented two or three acres in addition to his own less than one acre of glebe; and performed the humblest drudgery in the cultivation of these fields. Acts of kindness to his neighbours when hay-making or shearing their flocks, produced sometimes the present of a fleece or a haycock, less as a recompence than as a general acknowledgment. Unwearied industry and the strictest temperance, combined with unfailing economy, through a long-continued life, enabled him to leave behind no less a sum than 2000*l.*

Every evening in the week the Scriptures were read, while the rest of the household were at work, and thus the whole was repeatedly gone through. He was tenderly alive to all the duties of his pastoral office; the poor he never sent empty away; the stranger was fed and refreshed in passing that sequestered vale; the sick were visited, and the distresses of his neighbours, with which his talents for business made him acquainted, were relieved.

In this extraordinary man, things adverse in their nature were fully reconciled; his conversation was remarkable not only for its purity, but for its fervour and eloquence. His written style was correct, simple, and animated. And "the disinterestedness, impartiality, and

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uprightness which he maintained in the management of all his affairs," it is said, "were seldom separated in his own conscience from religious obligations."

His wife died before him only a few months, after they had been married to each other above sixty years. They were both in the ninety-third year of their age. He ordered that her body should be borne to the grave by three of her daughters, and one grand-daughter. "And when the corpse was lifted from the threshold, he insisted upon lending his aid, and feeling about, for he was then almost blind, took hold of a napkin fixed to the coffin; and, as a bearer of the body, entered the chapel, a few steps from the lowly parsonage."

Who is there that may not derive much instruction, reproof, and stimulus, from this singular narrative?

A STEAM VESSEL ON THE GANGES.

I WITNESSED the feeling of surprise evidenced by the natives of Calcutta, when the *Diana*, a steam-vessel, made her first trip up the river, which was some length of time before Captain Johnson brought out the *Enterprise*. *Wah! wah! wah!* was exclaimed on all sides. "Is it alive?" said a circar to a dingheywhallah. "See its feet," was the reply, pointing to the paddles. And it required the greatest self-possession to avoid laughing at the many serious questions that were asked respecting the vitality of the boat. When the matter began to be more clearly understood, I could perceive that the English character for wisdom rose much higher in the minds of the natives, as no discovery ever seemed more wonderful to them than that of making a boat to travel against the current of the river, without the aid of sails or tow-line, especially as in the river Hooghley it is a work of much labour and time to warp a ship up the river, even when stout hawsers are employed, with a hundred extra hands on board. The mariners belonging to a Chinese junk, lying off Burrah Bazaar Ghaut, seemed more amazed at the sight, if possible, than the Bengalese themselves, as, being less acquainted with European resources, they were not prepared to expect such a wonderful display of mechanical skill, their own vessel being probably the nearest in its construction to those by which Solomon used to receive "gold and silver, ivory, and apes, and peacocks." One thing, no doubt, is an improvement in the estimation of the Chinese, on the antique models to which I refer; that is, the Chinese junks have two large eyes painted on the bows. Upon my asking a Chinese carpenter why these eyes were placed there, he emphatically answered in broken English, "No eye, how see rocks?" The Manilla boats are also curious specimens of naval architecture; and if we take for granted that the rule laid down by some writers is correct, namely, "That we can pretty accurately judge of the progress which nations have made in civilization, by the perfection to which their skill in naval architecture has arrived," we must conclude that these nations are still far behind all others in the most important point of civilization.—*Statham's Sketches.*

PROGRESS OF ENGLISH STYLE OF WRITING.

IN the progress of English style, three periods may be easily distinguished. The first period extended from Sir Thomas More to Lord Clarendon. During great part of this period, the style partook of the rudeness and fluctuation of an unformed language, in which we had not determined the words that were to be English. Writers had not yet discovered the combination of words which best suits the original structure and immutable constitution of our language: where the terms were English, the arrangement was Latin, the exclusive language of learning, and that in which every truth in science, and every model of elegance, was contemplated by youth. For a century and a half, ineffectual attempts were made to bend our vulgar tongue to the genius of the language supposed to be superior; and the whole of this period, though not without a capricious mixture of coarse idiom, may be called the Latin, or *pedantic age*, of our style.

In the second period, which extended from the Restoration to the middle of the eighteenth century, a series of writers appeared, of less genius, indeed, than their predecessors, but more successful in their experiments to discover the mode of writing best adapted to the genius of the language. About the same period that a similar change was effected

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in France, by Pascal, they began to banish from style learned as well as vulgar phraseology, and to confine themselves to the part of the language naturally used in general conversation by well-educated men. That middle region which lies between vulgarity and pedantry remains commonly unchanged, while both extremes are equally condemned to perpetual revolution. Those who select words from that permanent part of a language, and who arrange them according to its natural order, have discovered the true secret of rendering their writings permanent, and of preserving that rank among the classical writers of their country, which men of greater intellectual power have failed to attain. Of these writers, whose language has not yet been slightly superannuated, Cowley was probably the earliest, as Dryden and Addison were assuredly the greatest.

The third period may be called the *rhetorical*, and is distinguished by the prevalence of a school of writers, of which Johnson was the founder. The fundamental character of the rhetorical style is, that it employs undisguised art, where classical writers appear only to obey the impulse of a cultivated and adorned nature. As declamation is the fire of eloquence without its substance, so rhetoric consists in the forms of eloquence without its spirit. In the schools of the rhetorician, every ornament of composition is made by a rule; where ornaments are natural, the feeling from which they spring, if it be tempered, performs the office of taste by regulating their number, and adapting them to the occasion; but those who fabricate them by the rule, without this natural regulator, have no security against unseasonable and undistinguishable profusion. These writers have not the variety of nature, but the uniformity of a Dutch garden.

During the period in which he was a favourite model, a stiff symmetry and tedious monotony succeeded to that various music with which the taste of Addison diversified his periods, and to that natural imagery which the latter's beautiful genius seemed with graceful negligence to scatter over his composition. They who had not fancy enough to be ornamental, sought to distinguish themselves by being artificial; and though there were some illustrious exceptions, the general style had all those marks of corrupt taste which Johnson himself had so well satirised in his commendation of the prose of Dryden, and of which he has admirably represented the opposite in his excellent criticism on Addison.—*Sir James Mackintosh.*

WILL YOU GO?

Some people say they are not to be frightened by what they are told about hell. They will acknowledge that they are not fit for heaven, but comfort themselves with the belief that the punishment of the wicked will not be so bad as is represented.

Such persons should be brought to reflect on what any place must be where the wicked shall be together for ever! For that is the least that can be said of the place of punishment. Let it be even supposed, that the world of misery, instead of being a dismal gulf, or a lake of fire, is such a place as this earth. Let the sinner imagine it to be as beautiful as Eden itself—we only ask him to acknowledge this one thing, that none but the enemies of God will be there. And we say this is a hell dreadful enough to terrify the stoutest heart.

Think of it! All that is now frightful in wickedness will be there. Do men now fear to meet a murderer or a robber? How will they feel when they are placed in their society for ever? Do they now shun the drunkard, the debauched, and the vile? But hell is the eternal home of such. Who would be willing to live with such persons as occupy our prisons, although they should dwell in palaces? Would not any place be intolerable with such society only?

But such will be hell. And worse. For in this world, even in prisons, the men of violence and crime are under restraint. The fear of punishment, the dread of disgrace, the desire of favour, the spirit of pride, and a thousand other motives keep men within some bounds. But in hell all these will be removed. There will be no motive to keep back the most outrageous crimes. All the vile and violent passions will be let loose. It will be like letting loose a multitude of furious maniacs. There will be no shame. The saints, whose influence kept them in some restraint, will be in heaven.

No laws will be there to keep them in check. There will be nothing to be gained by good behaviour and hypocrisy. Rage, hatred, madness, lust, violence will prevail. Despair will drive them on to

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unceasing wickedness. Curses and oaths, and all that is hateful and abominable in language, will be unrestrained.

All this must go on increasing in horror. No hope of escape will ever cheer one of the wretched company. Not an expectation of deliverance will be indulged. For ever and for ever it must last! Even death is denied; there is no weakening or decay of the life; there is nothing to alleviate or drown the anguish. There is nothing to gratify the wicked desires of the soul. The drunkard raves in vain for his cups. The sensualist burns with ungratified and growing appetites.

We ask, is not all this nothing more than the natural consequence of excluding sinners from heaven? Must not this be the scene where the "abominable" are fixed in one eternal place of exile? And should not this stop the sinner in his course, and cause every impenitent person to cry out, What must I do to be saved?

Reader, WILL YOU GO?

WILL YOU COME?

We now call the reader's attention to the voice which sounds from heaven. It is that of the Spirit and the Bride, saying, Come. It is echoed by him that heareth, Come. It presents one of the great alternatives presented to sinners in this life, and which in the day of judgment will mark the disposition of the two multitudes that will stand before the throne, when to one shall be said, "Come, ye blessed of my Father," and the other "shall go away into everlasting punishment."

And here, too, we will lay out of view all other representations of the glory and happiness of heaven which are given us in the Scriptures. We would, as in the other case, abstract every other consideration of what makes the happiness of heaven. We would leave out of view the visions of the beloved disciple, and of the apostle who was "caught up into paradise." We would simply ask the reader, whatever and wherever heaven may be, should he not risk every thing else to be for ever with the Lord? Would you not feel perfectly safe, and assured of happiness, if you believed you were going to dwell, without any ceasing, in the place where God is, an infinitely happy being, reconciled to and rejoicing in all who are with Him? Would you not be willing to trust your soul on such an assurance, though the place and the employments of heaven should be undefined?

Yes; this is the hope and confidence of the Christian. Now he is a son of God. This is enough for him to know, even though it doth not yet appear what he shall be. But he knows, too, that when his Redeemer shall appear he shall see him as he is.

Surely this is reasonable. After all that God has done for men, after all that Christ has endured for them, after all the manifestation of love which He has made to his redeemed children, they may be confident that their joy will be full when they are taken to his very presence in heaven. Surely, if God spared not his own Son for their sakes, he will, together with him, freely give them all things.

There, too, will be collected all that was pure and holy on earth and in heaven. The spirits of just men made perfect, and an innumerable company of angels, are there. Every being is holy.

Holy love will be universal throughout all the myriads. Peace and joy will prevail without any cessation or disturbance. There will be none to interrupt the harmony of the blessed family.

Should not this attract our souls to heaven? Is not this prospect of eternal peace and safety, this assurance of for ever dwelling with God and the saints, enough to captivate every heart that feels its immortality?

Reader, WILL YOU COME?

GRANDEUR OF THE SCRIPTURES.

SETTING aside the circumstances of their Divine origin, and consequent moral excellence, the Scriptures of the Old Testament present such a field of curious, useful, and noble investigation, on so many of the most interesting subjects which can occupy the human mind, viewed under so many romantic, elevated, and interesting lights; and they are, besides, so rich in all the elements of true sublimity and beauty, whether in poetry or history, that they are pre-eminently worthy of the most minute and patient study which the Christian philosopher, or the man of taste and genius, can bestow upon them. It will hereafter, perhaps, be regretted, as an anomaly in the history of the human intellect, that the poems of Homer should, for ages, have attracted the attention of the profoundest

minds, and been made, for a time, almost the exclusive object of criticism in all its forms, and of associated inquiry in all its ten thousand wanderings; and yet that the Hebrew writings of the inspired volume, though equally before the eye and in the memory of men, should have been long passed by with such total absence of every thing like an attentive study, as to have left the great body of the most learned critics completely ignorant of their true nature, and gravely mistaking their poetry for prose.

Without going into a minute consideration of the causes of this neglect, the reflection is now a very familiar one, that it has not been owing to the want of attractiveness and grandeur in these writings; for in these respects they far surpass any thing that can be found in the whole circle of Grecian and Roman literature. The spirit of their poetry goes deeper into the human soul, and breathes a finer harmony of feeling; it calls forth thoughts that will never come at any other bidding. —*North American Review.*

A QUESTION PROPOSED.

[From an American Publication.]

Dear Sir,—Excuse the liberty which I take in addressing you on a subject which, at first view, would appear to be calculated for the meridian of a secular publication, or one devoted exclusively to science.

As I have often been edified, however, by the contents of your paper, on various subjects not strictly of a religious character, I trust that you will receive this also, which, as an interesting question in natural philosophy, must claim the attention of every one who has a proper sense of the value of that science.

The point is this—I wish to be informed of the reason why the rain which falls on the first day of the week, is so much more injurious to the health of both man and beast who are exposed to its influence, than that which falls on other days of the week. Perhaps you will say to me, "Prove the fact, before you ask for a solution of it." Sir, the fact is undoubted, as I shall presently show to you. I live within the bounds of a congregation of Presbyterians in the country; in our church the fact has long been known. There is Captain A., Squire B., Elder C., Brother D., and a number of others, good and pious men, who assert it strongly. Understand me, however, I have never heard them declare their belief in words; but I know that the fact is so, from their constant practice. As I said before, they are pious and good men, and often join the rest of God's people in singing,

> "My heart and flesh cry out for thee,
> When far from thine abode."

Now, what but a conviction that Sunday's rain, cold, or storm, is especially deleterious, could induce them to put such a constraint on their governing inclinations as to cause them to forego the pleasure of assembling themselves together in God's house?

But there is another fact which, taken in connexion with the above, may perhaps help to explain it. I have observed that there are two days in a week when exposure to severe storms is not at all injurious. These are Wednesday and Saturday, on which days I have observed that no weather keeps them from market; for they are all market goers, careful men, look well after the main chance, provide well for their families, and thereby prove that they are not worse than infidels.

Now, sir, can you explain this matter, and give us some philosophical reason why there is this difference in days? may there not be some hidden sympathetic connexion between the animal system and the pocket, that would tend to explain it? Perhaps, however, you could convince us that it is all a mistake, that there is really no more danger in going to church than to market, and if you could do this, you might be the means of filling our pews even on a rainy Sunday.

A SABBATH IN THE ASYLUM AT HARTFORD, AMERICA.

[Written by a deaf and dumb Pupil.]

There is an interesting meeting in the asylum for the deaf and dumb, every Sabbath, which is the best day in the week, the best day in which heavenly things are taught, about our souls and a future state, that will make us better and happier. We should think of the goodness of God, who hath given it us to spend, so we may become more useful and good unto salvation, and dwell in his presence with the holy and happy angels for ever.

When the deaf and dumb rise every Sunday morning, we offer prayers to God, and thank him for keeping us alive

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through the night and the past week. At six o'clock we are called to breakfast, then attend prayer before eating and after eating. After an hour or two, we change our clothes, then all are seated in the parlour, and begin to study our lessons, which are in the Bible or catechism; also read some good books, not about amusement or trifling things, but about important and religious things, which are very necessary. The eldest pupils are willing to advise the youngest, and tell them not to talk about worldly things, and be attentive to their studies. After the girls are all seated around the parlour, the principal of the asylum comes almost every morning to inquire if all the pupils are well. At half-past ten o'clock, all the pupils are called into the chapel to attend meeting, except Miss Brace, who is deaf, dumb, and blind: she always recollects the Sabbath, and dresses herself neat and clean, then sits in her rocking-chair. Her appearance seems thoughtful in her mind; she uses to be quite still, and walks softly around the rooms.

When the meeting is ended, some of the pupils copy the sermons in a writing-book, also find the text in the Bible, for to keep in remembrance after they leave the asylum. The text last Sabbath was 2 Chron. xxxiii. 12. I was much surprised at the story about Manasseh, for he was so very proud and wicked a king. How much his father had advised him before his death; told him not to worship idols, but only God. Soon after, he refused to do so, and forgot the great God. He continued in worshipping the moon and stars till quite old. Then many people were discouraged with him, and bound him with fetters, and put him in prison, for he was so very cruel. While he remained in prison for some time, he indeed felt greatly sorry for his sins and bad conduct; he prayed to God for pardon, and God forgave him. This text teaches us how God afflicts people when they do any wrong actions, and they should not murmur against him, but submit themselves to his will. The clergymen have explained many interesting stories to us about the history of the Bible, some of which I had never heard before. Oh how many poor and ignorant deaf and dumb there are in the desolate regions, who have never been taught about their immortal souls!

Every Sabbath, after the sermons are explained, part of the girls sit in a circle, and converse with each other about the lecture on religion. At six o'clock, we are called to tea; when done, in half an hour, the pupils take a short walk. While getting dark, they light the lamps, and place them on the tables and shelf; then several of the instructors visit us, and tell us stories or news of what had happened; then they bid us good night, and return home.

Now, the Sabbath is past and gone, and another will begin every week, and we must feel very grateful to our heavenly Father for giving it to us, that we may rejoice in our hearts for that blessed day to spend it with gratitude.

We should be serious, and treat our instructors with great kindness and respect, because they have taken much pains in teaching us the gospel, and many useful things.

NATURAL BRIDGE IN VIRGINIA.

This famous bridge is on the head of a fine limestone hill, which has the appearance of having been rent asunder by some terrible convulsion in nature. The fissure thus made is about ninety feet; and over it the bridge runs, so needful to the spot, and so unlikely to have survived the great fracture, as to seem the work of man; so simple, so grand, so great, as to assure you that it is only the work of God. The span of the arch runs from forty-five to sixty feet wide; and its height, to the underline, is about two hundred feet, and to the head about two hundred and forty! The form of the arch approaches to the elliptical; and it is carried over on a diagonal line, the very line of all others so difficult to the architect to realize; and yet so calculated to enhance the picturesque beauty of the object!

There are chiefly three points of sight: you naturally make your way to the head of the bridge first; and as it is a continuation of the common road, with its sides covered with fine shrubs and trees, you may be on it before you are aware. But the moment you approach through the foliage to the side, you are filled with apprehension. It has, indeed, a natural parapet: but few persons can stand forward and look over. You instinctively seek to reduce your height, that you may gaze on what you admire with security. Even then it agitates you with dizzy sensations.

You then make your way about fifty feet down the bosom of the hill, and are supplied with some admirable standings

on the projecting rock-work, to see the bridge and all its rich accompaniments. There is, two hundred feet below you, the Cedar River, apparently motionless, except where it flashes with light, as it cuts its way through the broken rocks. Mark the trees, of every variety, but especially the firs, how they diminish as they stand on the margin of its bed; and how they ascend, step by step, on the noble rock-work, till they overshadow you; still preserving such delicacy of form and growth, as if they would not do an injury, while they lend a grace. Observe those hills, gathering all around you in their fairest forms and richest verdure, as if to do honour to a scene of surpassing excellence. Now look at the bridge itself, springing from this bed of verdant loveliness, distinct, one, complete! It is before you in its most picturesque form. You just see through the arch, and the internal face of the farther pier is perfectly revealed. Did you ever see such a pier—such an arch? Is it not most illusive? Look at that masonry. Is it not most like the perfection of art? and yet what art could never reach. Look at that colouring. Does it not appear like the painter's highest skill, and yet unspeakably transcend it?

This is exquisite. Still you have no just conception of this master-piece until you get below. You go some little distance for this purpose, as in the vicinity of the bridge the rocks are far too precipitous. A hot and brilliant day is, of all others, the time to enjoy this object. To escape from a sun which scorches you, into these verdant and cool bottoms, is a luxury of itself, which disposes you to relish every thing else. When down, I was very careful of the first impression, and did not venture to look steadily on the objects about me till I had selected my station. At length I placed myself about one hundred feet from the bridge, on some masses of rock, which were washed by the running waters, and ornamented by the slender trees, which were springing from their fissures. At my feet was the soothing melody of the rippling gushing waters. Behind me, and in the distance, the river and the hills were expanding themselves to the light and splendour of day. Before me, and all around, every thing was reposing in the most delightful shade, set off by the streaming rays of the sun, w shot across the head of the pictur above you, and sweetened the soli below. On the right and left, the maj rocks arose, with the decision of a but without its uniformity; mas broken, beautiful, and supplying a admirable foreground; and every w the most delicate stems were plante their crevices, and waving their h in the soft breeze, which occasion came over them. The eye now through the bridge, and was grati with a lovely vista. The blue mount stood out in the back ground; ben them, the hills and woods gathered gether, so as to enclose the dell bel while the river, which was coursing a from them, seemed to have its well-h hidden in their recesses. Then ther the arch, distinct from every thing, above every thing! Massive as it is is light and beautiful by its height, the fine trees on its summit seem only like a garland of evergreens; elevated as it is, its apparent elevatio wonderfully increased by the narrown of its piers, and by its outline bei drawn on the blue sky, which appe beneath and above it! Oh, it is sublim so strong, and yet so elegant; springi from earth, and bathing its head heaven! But it is the sublime, not alli to the terrific, as at Niagara; it is t sublime associated with the pleasin I sat and gazed in wonder and astonis ment. That afternoon was the short I ever remember. I had quickly, t quickly, to leave the spot for ever; b the music of these waters, the luxury those shades, the form and colour those rocks, and that arch, that arc rising over all, and seeming to offer passage to the skies—Oh, they will nev leave me!—*Dr. Reed.*

DISPUTATION.

Wilberforce records it in his journal, as "a good hint," received from Newton, that "he never found it answer his purpose to *dispute*."

LAZINESS.

Laziness grows on people; it begins in cobwebs, and ends in iron chains. The more business a man has, the more he is able to accomplish; for he learns to economize his time.—*Hale.*

W. Tyler, Printer, Bolt-court, Fleet-street, London.

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